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## ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS

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This procedure is, broadly speaking, designed to provide for the lung affected with tubercular inflammatory changes rest such as would be unhesitatingly afforded in the case of similar disease involving bones, joints or other tissues. It is doubtful whether the abstract recognition of the value of rest could have led to the institution of pulmonary immobilization as a therapeutic measure. Forlanini and others observed that a number of patients with pulmonary tuberculosis showed improvement after the onset of pleurisy with effusion. The mechanical compression of the lung by the effusion appeared the most obvious explanation of this fact, as the pressure would at all events rest the lung. It was a natural step to attempt to reproduce artificially the mechanical conditions of pleural effusion. Liquids were found, from their weight, less suitable than gases; oxygen and air were more rapidly absorbed from the pleura than nitrogen. In the early days of the procedure some accidents happened, but the generally successful results have led to improvements in technique by which a high degree of safety has been attained. The general outline of the method, as now practised, may be briefly stated. The pleura of the principally affected side is injected with nitrogen, usually some 500-600 c.cm. The layers of the pleura are thus separated, the lung being compressed and rendered stationary during respiration. The pleura begins at once to absorb the gas, thus lowering the intra-pleural pressure. To prevent re-expansion of the lung the injections are continued, and their amount gradually increased. The pleura becomes tolerant of the nitrogen, so that less is absorbed daily, and pulmonary immobilization may then be attained by injections at relatively longer intervals. Thus the initial interval of three days is extended to one, two, and later four weeks, ultimately to two or three months. It is usually advised that compression be maintained on the average for about two years. Confinement to bed is necessary only for the first two or three weeks. But even in the later months it is well that the patient rest in bed for a few hours before the injection, and remain resting till the following day. Though applicable under the circumstances of out-patient practice, this is not as desirable as the conditions described.*

Pulmonary tubercle usually shows some tendency to heal. Even where destructive processes predominate there is generally some attempt at encapsulation. This may lead to the overcoming of the infection. But an essential condition for cicatrization is that there should be opportunity for contraction. In the lung this is a matter of considerable difficulty. Respiration must be consistently maintained, and with each inspiratory movement there is a stretching of the tissues. Whatever beneficial secondary effects may be claimed for active pulmonary movement, it will generally be prejudicial to the local reparative processes. The development of compensatory emphysema in the vicinity of a tubercular focus, and the blockage of the affected terminal bronchioles, suggest that local immobilization is part of the natural defensive mechanism. The changes occurring in the lung under compression have been studied by a number of workers. Some experimental evidence was given by Breccia, of Genoa, to the International Congress, of Internal Medicine at Rome, in 1913. Employing anthropoid apes, he found that pneumothorax healed the tuberculosis areas by provoking sclerosis. Observations on other animals showed that compression of the lung always led to an over-filling of the veins and arteries of the parenchyma even to their very smallest branches. This is a condition of passive hyperæmia closely resembling that arrived at in Bier's treatment. In that treatment we know that probably a great deal of the benefit experienced is dependent on subtle immunizing serum and tissue reactions. The conditions for such reactions are present in the compressed, passively hyperæmic lung.

While the immobility of the lung naturally presents aspiration of infective material into distant parts, it might be thought that bacilli would thrive in the compressed tissue. Rist, of Paris, is quoted by Perkins as stating that in post-mortem examinations carried out in after years on successful cases not a single fresh tubercle was found on the side that had been compressed. On the other hand, compression does not confer on the lung any power of resisting the implantation of tubercle. Thus Schur and Plaschke's experimental studies showed that when tuberculosis was induced experimentally in rabbits by intra-venous or intra-tracheal introduction of bacilli, the presence of pneumothorax had no influence in limiting the development of the disease. Post-mortem evidence is not abundant, and the findings of different observers are not wholly consistent. The multiformity of the lesions naturally encountered in pulmonary tuberculosis makes it difficult to determine the amount of tissue change to be justly credited to the natural defensive reactions and the treatment respectively. Certain forms show a marked natural tendency to fibrosis and encapsulation of lesions; in others this character is not present. A very important claim in favour of this treatment is its asserted tendency to facilitate fibrosis. A possible disadvantage is the fear that the lung, subjected to prolonged compression

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* The apparatus and technique were demonstrated.

and venous congestion, may become the seat of more general fibrosis than is necessary or desirable. Such general fibrosis would tend to hinder the ultimate re-expansion of the lung at the conclusion of treatment. These points are not yet satisfactorily decided. While Arena, for instance, reports abundant fibrosis, Bruns, on the other hand, states that he found no fibrosis except in relation to the inflammatory process. My own experience clinically has been that at any rate in the early months of the treatment the lung tends only too much to re-expansion.

The pleura is usually said to show slight thickening, and effusion is stated to occur in about 30 per cent. of the cases. In about 50 injections I have not seen a trace of effusion, even with the help of X-ray examinations. Much work has been done in the study of effusions supervening in the course of pneumothorax treatment. In the simplest and most characteristic form they are attributed to a specific irritating effect of nitrogen on the pleural membrane, and the prognosis is generally very good.

In the days of the earliest application of the pneumothorax procedure its sponsors recognized that it might easily set adversely on tuberculous foci in the opposite lung, upon which of necessity a considerable strain is thrown. A little later it was found, and is now held by almost all workers in this field, that slight apical lesions in the contralateral lung tend rather to heal than to be adversely affected by the operation. This effect is explained by the lessened toxic absorption from the compressed side, and the consequent systemic improvement.

It is essential to avoid undue strain on the opposite lung by too rapid or too complete compression. There should also be remembered the danger of squeezing into the tubes toxic material from cavities in the lung that is being compressed, giving opportunity for this to be aspirated into the sound side. This consideration again points to judicious, gentle and gradual procedure.

The very obvious immediate effect of pneumothorax on the opposite lung is to overdistend it. Loud breathing (compensatory) is to be heard over it, and the percussion note becomes strikingly hyperresonant. The heart is displaced from the injected side, but is pushed back again during each inspiration by the over-expanding opposite lung. I have observed a most striking swing of the heart from side to side for two inches with each breath, the patient showing no distress, cyanosis, or disturbed breathing.*

The large numbers of reports available give generally favourable results in a fair percentage of cases. My patients have all experienced relief, and shown general improvement. None have shown distress or deterioration. But in none has the duration of treatment been sufficiently long to speak of anything more than immediate results. I hope to record the ultimate results at a later date.

Gas embolism was responsible for some sudden deaths when this treatment was first practised in Europe. If the points emphasized in the demonstration of technique are properly attended to, the risk of this occurrence can be eliminated. It is essential to be perfectly certain that the needle-point is in the pleural cavity before allowing the nitrogen to flow. The characteristic negative pressure with ample respiratory oscillation should be obtained in a case operated on for the first time. In later cases the pressure may be different, perhaps even positive if it be repeated soon after the preceding injection, but here, too, a fair respiratory oscillation should be expected. In any case, however, a negative pressure should be created in the gas-holder before the tube from it to the needle is opened. If the water then flows readily, and no blood appears in the absolutely indispensable glass index beside the needle, the point is in the pleural cavity, and the gas may be cautiously introduced. If the water does not flow readily the needle may have become blocked. To test this the gas tube should again be clipped, and the manometer circuit opened. If the negative pressure and respiratory oscillations are no longer transmitted, the needle is blocked, and must be cleared. If the readings are satisfactory, negative pressure may again be applied. If the water does not run it means probably that the pleural surface is drawn against the aperture, and the pressure may be gradually raised. With these precautions no embolism will occur. For extra safety oxygen may be used at the commencement, especially for a first injection, in which admittedly the risk of embolism is greater than in refillings. If an oxygen embolus occurs it is readily absorbed, and no harm results.

A great deal can be done to prevent the so-called pleural shock. The patient should be thoroughly at rest for a few hours before the operation, well settled, and comfortable in bed. A preliminary hypodermic injection of 1/6th grain of morphine may be given 20 minutes beforehand. Stimulants should be kept in readiness, and extensive exposure avoided. The skin and subcutaneous tissues are infiltrated with a local anæsthetic solution. Some advise even injecting the pleura itself. The needle, though ground rather flatly, should not be so blunt or rough as to demand much force for its introduction. The gas should be used warm, either by warm jacketing the apparatus, or by using hot water in the gas-holding system. The pressure should be slight, and the rate of the flow gentle.

Excessive auto-inoculation may occur from the forcing of toxic material into the circulation. Caseating tissue is very rich in toxins, and cases where this is abundant are by some considered as unsuitable for the procedure. Careful regulation of the quantity of nitrogen should enable the observer to avoid any dangerous tendency.

If the patient is properly instructed always to expectorate his sputum, he greatly lessens the risk of developing intestinal tuberculosis. If infective material is being squeezed out in fair quantity into his bronchial tubes this measure should be insisted on more strongly, if possible, than ever.

*The general results of the treatment were briefly discussed by the author, with reference to several personal cases and series published by various writers.

Cardiac embarrassment from pressure of the gas is never seen when the procedure is carefully performed. The patient is instructed to mention the first indication of discomfort, and frequent readings of the manometer are made. The terminal pressure will vary with the case, the need for breaking down adhesions, the number of times the operation has been performed, the pressure the patient has been able to stand previously, and the effect it has had in keeping his lung compressed, etc. A slight end-pressure (4-6 cm. aq.) is a good one for a first operation, and in the absence of adhesions this pressure need not be materially exceeded.

Any form of infection is excluded by rigorous attention to aseptic technique.

Indications.—Unilaterality of disease constitutes a relative indication. The arguments for immobilizing one lung tell against over-working the other if at all diseased. This has been referred to above, and the tendency of slight lesions in the opposite lung to heal under this treatment has been mentioned. The physician should be satisfied that there is enough healthy lung tissue on the other side to carry on respiration satisfactorily. At least two thirds should be quite healthy, and any disease present should not be of an actively extending type. Progressiveness of disease, or non-improvement in spite of treatment under favourable conditions is far more important than extent of involvement. We need not hesitate to compress a lung, which has only one lobe affected, if the course of the disease shows that the whole lung is likely to be involved in time. On the other hand, though the greater portion of a lung be involved, if it show a tendency to improvement, one should refrain from inducing pneumothorax. Should the condition begin to hang fire at a later date, or to retrogress, or signs be shown of commencing trouble on the other side, compression may be applied. In disease that is both progressive and mainly unilateral the indications for the induction of pneumothorax may be said to be strongly presented. If only one of these characters is shown the wisdom of adopting such treatment is questionable. Many cases, for example, are unilateral but not progressive. The pneumothorax treatment has not sufficiently justified itself to warrant its employment where there is good ground to expect recovery from more orthodox treatment. This is true even in strictly unilateral cases. On the other hand in a case definitely progressive, though to some extent bilateral, the indications may be stronger. Forlanini has had some success in treating bilateral cases by keeping first one side compressed for a few months, and then the other. The cases most likely to benefit from the treatment are thus those with progressiveness of disease on one side, with a healthy lung or one showing only limited non-progressive lesions on the other side.

In one particular group of cases the procedure is strongly indicated as an emergency method, namely, in severe recurrent hæmophysis. The side of the hæmorrhage, if it can be identified, should be compressed, and the bleeding will stop. If it does not stop after satisfactory pressure has been applied, the gas can be withdrawn, and compression applied to the other side. In other classes of case the operation may be indicated as a palliative measure. This is especially the case in patients with cavities, which either secrete large quantities of sputum, causing cough, and destroying rest, or which are the sites of production of toxins in large amount. In the latter case great suffering results. Compression may be of benefit in these cases, being, as Louis Renon has said, comparable to a palliative operation for carcinoma. No curative result can be expected if the patient has serious disease in other portions of the body. Laryngeal tubercle, however, is no contra-indication, and is benefited by the treatment. Pleural adhesions often make the procedure impracticable where it would appear to be definitely indicated. If they are strongly marked effective compression is impossible. I have succeeded in compressing a lung where clinical examination, with the help of the X-rays, appeared to indicate very extensive adhesions. I should advise making the attempt rather than deciding against it on account of adhesions in a case otherwise suitable.

Although, unfortunately, available only in a small percentage of cases, this treatment is to be regarded as one of the most encouraging recent developments of pulmonary therapeutics. Its general recognition as a possible method for certain cases should invest with some definite therapeutic value the minute details of diagrams and prognosis, and thus stimulate more accurate and fruitful work in those directions.

## AN ACCOUNT OF THE QUEEN VICTORIA SANATORIUM AT THIRLMERE.

By **Lillian A. Maclean, M.B., Ch.M. (Syd.),**
Medical Superintendent.

The Queen Victoria Sanatorium for Women at Thirlmere, New South Wales, together with the similar Institution for Men at Wentworth Falls, is governed by a Board of Directors, and is maintained chiefly by public and private subscriptions, assisted by a Government subsidy. The institution contains 54 beds, of which 50 are in general wards and chalets, the remaining four being in the semi-private ward donated by Mrs. Hugh Dixson. The wards are large and airy, the numerous windows and doors being kept open day and night all the year round.

The altitude is 960 feet above sea level. No fires are allowed. The institution is lit inside and out with acetylene gas; there is a hot water service, heated by a special furnace, and a water-borne sewage is in use. The gardens are large, and the institution stands in 340 acres of its own grounds. A special feature is the Liegehalle, a large open shelter for use in the daytime, with a writing room attached. For the use of the patients who are able to do their own washing, a small laundry was built two years ago. The water supply is derived from three sources, namely, the Picton main from the Bargo reservoir (for drinking, cooking, etc.), rain water, and a large dam recently built near the Sanatorium.

The staff consists of a Medical Superintendent, a Matron, staff nurse, probationer, wardsman, and wardsmaid, a housekeeper, cook, kitchenman, housemaid, and overseer and driver.

The staff quarters consist of two cottages, one for the resident medical officer, the other for the matron, housekeeper, and nurses. The men servants are accommodated in the basement of the main pavilion.

Conditions of Admission of Patients.—As one frequently hears of the difficulty of securing admission for a patient to these institutions a brief account of the necessary procedure may not be out of place.

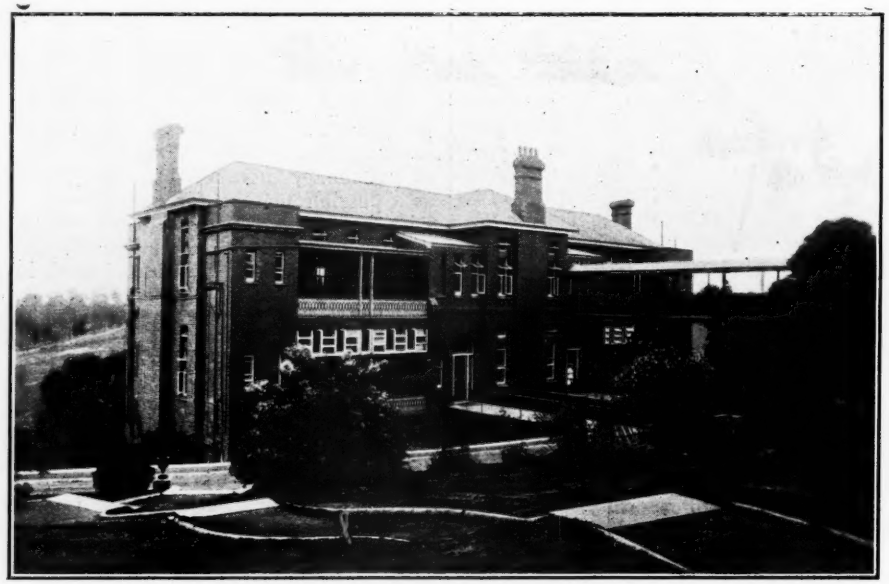
Only early and favourable cases of pulmonary or laryngeal tuberculosis are eligible for admission, but more advanced cases are sometimes sent in on probation. All applicants resident in Sydney and suburbs, on being recommended as suitable by their own medical attendant must apply to the Secretary of the Q. V. Homes at the Board of Health, Macquarie Street, who attends on Tuesdays and Fridays of each week at 2.30 p.m., for the purpose of receiving applications. These applications are recorded in a book kept for the purpose, and each applicant in his or her turn is notified by the Secretary as to the day and time to attend for personal examination by one of the Board's medical referees, who decides whether the case is suitable or unsuitable for treatment. If the case is considered suitable for treatment the Secretary arranges for the admission of the patient within seven days. Applications for patients resident in the country are received by letter addressed to "The Secretary, 7 Bligh Street," who forwards a form to be filled in by the doctor attending the patient. This form, on being returned to Bligh Street, is submitted to one of the Board's medical referees, who judges by the information therein whether the patient is likely to pass the personal examination. This course is adopted to save the patient the unnecessary expense and fatigue of travelling to Sydney if there is no hope of his or her passing the medical examination. Patients, to be eligible for admission to the general wards, must have been resident in this State for a period of 12 months, but this rule does not apply to Dixson Ward patients.

The routine treatment may be divided into four sections:—

(1) General hygiene, rest and graduated exercises in the open air.
(2) Diet.
(3) Tuberculin.
(4) Drugs.

(1) Rest and graduated exercise, etc.—The course of graduated exercise now consists of walking and all kinds of housework and gardening. Previously to 1911 the system in use was one of graduated walks with very little housework. In 1911 work in the garden was begun, very gradually at first. As it was found that the majority of patients could do an hour or more of gardening without symptoms of over-exertion, the system of graduated manual labour was extended. At this time, Dr. Marcus Paterson's book—"Auto-Inoculation in Pulmonary Tuberculosis"—was published, and this book was of the greatest assistance in forming a system of graduated labour. Our present system of seven grades of exercise following upon a longer or shorter period of rest, suited to the needs of each individual case is practically modelled on that used at Frimley by Dr. Paterson.

On admission each patient is given a chart, and thermometer, and is taught to record her own tem-



QUEEN VICTORIA SANATORIUM, THIRLMERE.

perature four times a day, the daily amount of sputum, weekly weight, etc. She is also allotted a full length cane lounge with blankets and cushions for use during the "lounge" hours in the daytime, which are from 9.30 to 10.30 a.m., 12 noon to 1 p.m., 2 p.m. to 3 p.m., and 5.15 to 5.30 p.m. Exemption from "lounge" hours is included in some promotions to a higher grade of exercise. The patient is taught to use a sputum flask in the daytime and a mug at night. The family history, history of present and past illnesses, etc., is taken in the usual way on admission, and the general condition, state of heart, lungs, larynx, and any other system requiring attention, the urine analysis and examination of sputum are recorded.

The course of treatment begins in all cases with a week's rest on a lounge. In advanced or complicated cases much longer rest may be required before beginning the grades of exercise.

ing in length gradually, and containing some steep hills to a maximum of six miles daily. Ordinary lounge hours.

Third walks: Walks to a maximum of 10 miles in winter, 7 in summer. Exemption from 9.30 to 10.30 a.m. lounge hour.

Working grade 1: One long walk and two hours' light work in house or garden, such as dusting, cleaning silver, washing up dishes, sometimes sweeping, cutting grass edges, raking grass.

Working grade 2: Two or three hours of harder work and a long walk, with lounge hours at midday, 2 p.m. and 5.15 p.m. as before. Extra work allowed—lawn mowing (with specially light machine), weeding, and light hoeing.

Working grade 3: Four hours' work. Walk optional. Washing ward floors, heavier lawn mowing and hoeing added to previous exercise.

Working grade 4: Five to seven hours' work.

"GRADERS" READY FOR WORK.

The Grades.—Of the seven grades the first three consist of graduated walks to a maximum daily distance of 10 miles, while the remaining four are "working" grades, in which graduated manual labour gradually replaces walks till the patient is able to do five to seven hours' work daily. In an uncomplicated first stage case, the whole course of treatment should occupy 10 to 12 weeks, and is arranged as follows:—Rest, one week; walking grades 1-3, four weeks; working grade 1, one week; grade 2, two weeks; grade 3, one week; grade 4, three weeks.

The following is a more detailed account of the grades:—

First walks (1 week): Two short walks daily, on the level or up a slight incline to a maximum of two miles in the day reached by the end of the week. Intervals spent in lounging.

Second walks (1½ to 2 weeks): Walks increas-

Polishing linoleums and all kinds of indoor and outdoor work available, even white-washing fences. Lounge hours and walks optional.

More advanced cases and first stage cases in which complications occur, require a longer time to complete the course of treatment. Symptoms of over-exertion or complications are treated by putting the patient back to the beginning again, and when recovered working her up more rapidly through the earlier grades again. Whatever the stage of the disease, the final test is the same for all cases, namely, three continuous weeks of fourth-grade work.

Our definition of an "arrested" case is, then, a patient who (in any stage of the disease), having gone through a course of treatment extending over not less than 10-12 weeks, has finally been able to do fourth-grade work for a continuous period of three weeks, and is free from pyrexia, cough, and ex-

pectoration containing tubercle bacilli. Gain in weight usually occurs, but is not essential. The physical signs in lungs and larynx show slowly progressive improvement as the patient advances from grade to grade, but are found to be of little value as a guide in increasing the exercise, the chief indicators being the general condition and symptoms, such as temperature, cough, dyspnœa, amount of sputum, etc.

No case of hæmoptysis during grade work has occurred.

In laryngeal tuberculosis absolute silence, to rest the larynx, is added to the other general treatment as for the pulmonary disease, and is found to be very effective. Local treatment of the larynx other than the occasional use of sprays, and inhalations or counter irritation applied externally to the skin over the thyroid and cricoid cartilages, is rarely required.

renal tuberculosis except during an acute exacerbation.

3. Tuberculin is given in every case unless contraindicated by too advanced a stage of the disease, too high a temperature, mixed infection and other complications. Nearly all the "arrested" cases were treated with tuberculin. Old tuberculin is used for purposes of diagnosis in doubtful cases. For therapeutic purposes the varieties of tuberculin chiefly used have been bacillus emulsion, Beraneck's tuberculin and bovine tuberculins, P.T.O. and P.T. A small initial dose is used, e.g., .0001 c.cm. P.T.O., and this is increased in bi-weekly injections. The increase is usually ¼ to ½ the previous dose, and febrile reactions are avoided if possible. The relative and absolute value of the different preparations is difficult to estimate when their administration is carried on side by side with Sanatorium treatment which in itself produces such marked results. The method

"GRADERS" AT WORK.

2. The diet consists of three good plain meals a day, with the addition of milk in quantities ranging from 2½ pints daily on admission, to one pint daily, or less, later on.

Breakfast, at 8 a.m., consists of porridge or bread and milk, a hot meat dish, such as chops or steak, bread, butter, honey, and syrup. A cup of milk hot or cold is given to each patient at 10.30 a.m. and at 3.30 p.m. No other food is allowed between meals.

Dinner, at 1 p.m., consists of a roast or boiled joint, etc., two vegetables, milk pudding or steamed pudding, and occasionally soup and stewed fruits.

Tea, at 5.50 p.m., consists of cold meat and salad, or some hot dish such as a stew, or curry and rice, butter, jam, cheese, scones, and occasionally plain cake. One cup of tea, coffee, or cocoa is allowed at breakfast and tea.

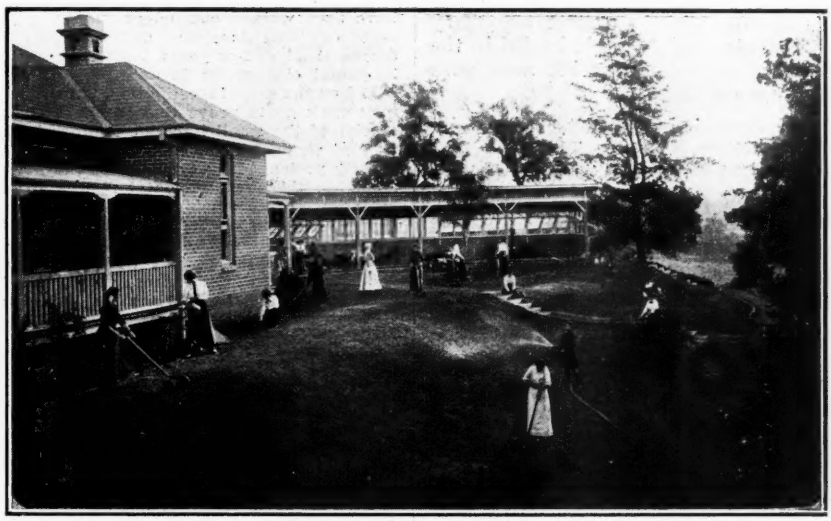
Patients with complications are given any special diet temporarily required. Full diet is allowed in

of administration is more important than the variety of tuberculin, and most important of all is the idiosyncrasy of each particular patient. Beraneck's tuberculin is very mild, and seldom produces noticeable reactions. I have seen two patients who showed no reaction to 1 c.cm. Beraneck's tuberculin react a few days later to .0005 c.cm. old tuberculin, and to .0005 P.T.O. respectively.

4. Drugs.—Very few drugs are used. Aspirin is used largely for the headache, neuralgia and pleuritic pains. For troublesome cough a sedative mixture containing syrup of Virginian prunus is tried, and is usually effective in worse cases if unrelieved, pil-codeinæ gr. ½ is given, and more seldom tinct. chlorof. et morph. co., min. v-x, but on the whole very little morphia is used, except in cases of hæmoptysis, or in hopeless cases towards the end, when a hypodermic injection of morphia with strychnine has a very marked effect in relieving the urgent attacks of dyspnœa with cardiac distress.

Our routine treatment of hæmoptysis is absolute quiet, full dose of morphia hypodermically, chloride of calcium gr xv., second hourly, and cold liquid diet, occasionally inhalations of amyl nitrite. Complications such as asthma and rheumatism are treated in the ordinary manner. For the troublesome nausea and vomiting associated so frequently with pulmonary tuberculosis, a mixture containing bicarbonate of sodium, spirits of chloroform and compound infusion of gentian is usually an effective remedy. The usual aperients are cascara and sulphate of magnesium; calomel occasionally.

Results of Treatment.—The following table gives the result of treatment in 264 cases discharged in the years 1911-1913. Some cases whose stay in the Sanatorium—a month or less—was too brief for adequate treatment, have been omitted:—



"GRADERS" AT WORK.

| Stage of Disease, Turban's Class. | No. of Cases. | Disease Arrested. | Much Improved | Improved | Unimproved | Died. |
|---|---|---|---|---|---|---|
| Stage 1 .. | 125 | 89 = 71.2% | 21 | 10 | 5 | — |
| Stage 2 .. | 90 | 31 = 34.4% | 34 | 11 | 12 | 2 |
| Stage 3 .. | 49 | 5 = 10.2% | 14 | 13 | 13 | 4 |
| Total .. | 264 | 125 = 47.3% | 69 | 34 | 30 | 6 |

Total number improved .. 228 = 86.3%

Total number unimproved .. 36 = 13.7%

Many patients have left before completing the course of treatment, some of them when nearing the "arrested" condition, so that the percentage results as given above do not truly represent the number of patients who would become "arrested" under treatment, but only those who can or will stay long enough to obtain this result. The average duration for a first stage arrested case is three to four months, for a second stage case seven to eight months.

Tubercle bacilli were found in the sputum of 135 cases. Tubercle bacilli were found in 35 of the arrested cases, i.e., in 25.9 per cent.; 16 were in the first stage, 14 in the second stage, and five in the third stage.

A family history of tuberculosis was admitted in 104 cases.

Exposure to infection from contact with tubercular patients or houses could be traced in 147 cases, including all but a few of the 104 cases with tubercular family history.

Hæmoptysis occurred before admission in 109 patients, after admission in 29.

Six deaths occurred from advanced pulmonary or laryngeal tuberculosis.

Complications may be classed as tubercular and non-tubercular.

(a) Tubercular Complications—The most frequent was tuberculosis of the larynx, of which 16 cases were noted in this series of 264 cases. In addition there were tuberculosis of kidney or bladder 3, of glands 3, of the spine (Pott's disease) 1, meningitis 1, intestinal 3, pneumothorax 2, pleurisy with effusion, tubercular hip sinus, ischiorectal abscess, severe hæmoptysis, bronchiectasis.

Some other complications seem to have a definite connexion with the tubercular process, e.g., the rheumatic pains, gastritis, and in some cases gastric ulcer and asthma.

The non-tubercular complications include all the complications likely to be met with in general practice. Amongst this series of 264 cases the chief complications were:—

Alimentary system: Acute gastritis 3, gastric ulcer 1, appendicitis 2, dental caries (numerous), pyorrhœa alveolaris 2, constipation (frequent).

Respiratory system: Asthma 4 cases, œdema of glottis 1, hydatid of lung 1, peritonsillar abscess 3, tonsillitis, naso-pharyngeal and laryngeal catarrh (numerous).

Nervous system: Epilepsy 2, melancholia 1, neurasthenia 2.

Blood vascular system: Anæmia (almost invariable), varicose veins 2, cardiac dilatation 2, mitral incompetence 2, mitral and aortic incompetence 1, pulmonary stenosis 1, mitral stenosis 1.

Muscular, osseous, etc.: Myositis (rheumatic and tubercular), traumatic periostitis 2, patellar bursitis 2, sciatica 1.

Urinary system: Movable kidney with Dietl's crisis 1.

Genital system: Pregnancy 5, childbirth 1, incomplete abortion 1, metrorrhagia 1, dysmenorrhœa (frequent).

General infectious diseases: Influenza 2, measles 2, also diphtheria 1; acute rheumatism with endocarditis, yielding to salicylate of sodium 1, secondary syphilis 1. The last case had tubercle bacilli in the sputum and a typical secondary specific rash, with a positive Wassermann reaction.

The disposal of sputum is attended to twice daily in a special room in the basement. This room has an ironite floor and tiled walls, and is fitted with an incinerator, a boiler, and a sink which drains into a special underground brick chamber at some distance from the building. Each patient takes her own mug or flask, and empties its contents into the incinerator. She then hands it to the nurse in charge, and takes in its place a clean sputum mug containing 1 in 20 carbolic from a table close by, and leaves the room. On one morning each week all the patients stay to watch the whole process of cleaning and boiling the mugs for purposes of instruction. The nurse has a supply of swab sticks made with linen rags. Each mug is rinsed and swabbed with a disinfectant till free from sputum, and the rinsings are poured into a special bucket and afterwards incinerated. The mug is finally immersed and rinsed in the sink containing some disinfectant, and then put into the boiler for 20 minutes. After boiling it is cleaned with sandsoap, some 1 in 20 carbolic is placed in it, and it is ready for use next day. Flasks are treated similarly, except that they are soaked in disinfectant for 12 hours instead of being boiled. The swab sticks are burnt after use, the buckets boiled, and the floor swabbed with disinfectant daily.

The patient's amusement consists of picnics, concerts, music, card playing, croquet, fancy work and fancy dress teas, in the last of which much skill and originality in devising and making costumes is shown. Most of the patients are bright and happy in their appearance and dispositions, and they are encouraged not to regard themselves as invalids, except when it is necessary. They are not allowed to indulge in games associated with sudden excitement or rushing about, but otherwise are left as much to themselves as possible in their recreation hours. Visitors usually remark with surprise how well and happy the patients look.

Some photographs of the institution and of the patients at work are reproduced.

## Reports of Cases.

### INTESTINAL DRAINAGE IN PERITONITIS.

**By Arthur J. Nyulasy, M.R.C.S. (Eng.).**
Gynæcologist to the Perth Hospital.

In a paper contributed to the "Australian Medical Journal," May 24, 1913, I took up the position that in peritonitis drainage of the intestine should be regarded as a great principle of treatment, and held then, as I do now, that, exclusive of the drainage of definite septic necrotic areas in the abdominal cavity, intestinal drainage is the only rational form of drainage in the treatment of acute peritonitis. In again advancing this principle, it is, of course, assumed that the septic focus can be eliminated by excision or by quarantine, and that poisonous fluids are wholly, or very largely, removed from the abdominal cavity.

In the paper referred to, three cases of acute peritonitis were described, in which paralytic obstruction, and consequent toxæmia, was successfully treated by intestinal drainage. Now, although in this connexion my own conclusions have been worked out independently, it yet seems well to point out that American and continental enquirers have, during the last few years, been experimenting on artificial intestinal obstruction in animals, and are at present engaged on the same investigation. The results of this laboratory work go to prove that mechanical obstruction (acute stasis) of the small intestine in dogs leads to the production of virulent toxin in the bowel, and that life may be greatly prolonged by drainage of the bowel (enterostomy). Applying these experimental results to the paralytic obstruction (acute stasis) of acute peritonitis in man, and, assuming the septic focus is eliminated and the abdominal cavity is not charged with excessive poison, it may be stated generally that the patient with peritonitis dies rather of the bowel than of the peritoneum. If this view be accepted, the rationale of the treatment of acute peritonitis by intestinal drainage seems justified. The results in my previous three cases of intestinal drainage and in the two cases now submitted tend to make the justification complete.

#### Case I.—Salpingectomy, Appendicectomy; Paralytic Obstruction, Cæcostomy; Recovery.

Mrs. B., multipara, aged 35 years, was admitted to the Perth Hospital with pyosalpinx. The abdomen was opened on July 22, 1914, and densely and extensively adherent pus-sacs were removed, the stump of the left broad ligament being very thick and necrotic, and so friable that ligatures cut through as if it were cheese. The inflamed adherent appendix having been then removed, the patient's condition was found to be very bad, and, as bleeding had practically ceased, the abdomen was closed without drainage. After operation shock was so great that the head and body required to be kept low until the next day, when the patient was gradually raised into the Fowler position. Thence onwards the condition progressively deteriorated, until the evening of the following day (24th July), when the patient was obviously in a very grave state. She looked drawn and anxious, her colour was bad, being a dirty-looking pallor, the tongue was dry and coated, there was much abdominal pain, vomiting was almost continuous, the abdomen was enormously distended, the hands were cold and clammy, and the pulse a mere thread. At this time the temperature was 97°, pulse over 140, and respirations 40, and in every way the case looked very hopeless. On opening the abdomen over the cæcum, a good deal of watery blood-stained fluid appeared, and was well mopped out. On incision of the cæcum intensely foul gas whistled out, and a large quantity of dirty, greyish-yellow fluid gushed out with force. It is to be noted that this fluid, as observed in previous cases, evidently contained some caustic toxin, for the freshly-cut abdominal tissues showed marked sloughing in a couple of days, in spite of the absence of further fæcal soiling after the cæcostomy. The lower end of the median abdominal wound was next opened, and a good deal of blood-stained fluid mopped out of the pelvis, a split tube and wick being inserted. When seen about two hours later, the patient had become delirious, and so obstreperous that it had been found necessary to restrain her. I discovered that the cæcostomy tube had been blocked,

This was remedied, and the improvement thence on until next day was so consistent, that I felt satisfied that the preliminary failure of the cæcostomy tube had permitted toxin to remain in the bowel and set up delirium. This course of events also suggested the likely progress of the case to a fatal ending if cæcostomy had not been carried out. Improvement was rapid, and two and a half days after the cæcostomy the patient was reading the newspaper. Both before and after cæcostomy the rectal drip saline had been given, and Sister Ross, who directed the nursing of the case, has supplied the following table:—

| | Proctolysis. | Cæcostomy Drainage. |
|---|---|---|
| First 24 hours .. .. | 3¼ pints .. | 2 pints. |
| Second 24 hours .. .. | 6 pints .. | 3¾ pints. |
| Third 24 hours .. .. | 3¾ pints .. | 2½ pints. |
| Fourth 24 hours .. .. | discontinued .. | 3½ pints (nearly) |

**Case II.—Salpingo-oöphorectomy; Paralytic Obstruction, Cæcostomy; Recovery.**

Mrs. A., multipara, aged 33 years, was admitted to the Perth Hospital with a large mass in the pelvis. A few days earlier some ounces of foul pus were passed per rectum, the temperature falling to subnormal (96°), the pulse rising to 120, and the general condition remaining poor until operation. The abdomen was opened on July 29, 1914, and revealed a very densely and universally adherent left tubo-ovarian abscess containing about ten ounces of horribly fœtid yellow pus. After salpingo-oöphorectomy a large dirty necrotic surface was left behind the broad ligment and uterus. A medium-sized adherent right pyo-salpinx was also present, and the tube and most of the ovary were removed. A split rubber tube with gauze was passed down to Douglas' pouch. By this time the patient was in a condition of profound shock, a state in which she remained the whole of next day, so that it was impossible to place her in the Fowler position. Towards the end of the day, however, the head of the bed was gradually raised, while it was noted that a small quantity of foul pus passed by the rectum. The patient made much complaint of a continuous feeling of "sinking through the bed." During the early morning hours of the following day (July 31) she became very restless, the abdomen was distending, the pulse was very poor and quick (132), the temperature 96°, and the respirations 40. By noon of this day it was apparent that a great change for the worse had taken place. The patient looked critically ill, her face was pale, and her lips inclined to be livid, and the nose pinched. The pulse was over 144, the respirations 44, and the temperature 96°, and the abdomen was considerably distended, but vomiting was not urgent. It was obvious that there was a marked deterioration from the morning, although there was little complaint except of the heat of the electric-light bath. I felt that the patient was now practically beyond the reach of surgery. Without altering her position in bed, and under local anæsthesia, an oblique incision was made over the cæcum, a couple of pints of saline being run into the median basilic during operation. On opening the abdomen sero-purulent fluid was mopped out from the pelvis. On incising the cæcum foul gas whistled out, and yellow fluid fæces gushed through the small opening. The gauze wicking in the median drain tube was removed, and some stinking pus sucked out by a syringe. At the commencement of the cæcostomy the patient had complained a little, but at the finish was perfectly quiet. On then turning to examine her I saw that she seemed as if about to succumb. Her face was ghastly pale, her lips livid, and her nose very pinched, her eyes were fixed, and the white sclerotics painfully obvious, her whole body was immobile, while her expression was that of one who had given up a hopeless struggle. Her pulse was the merest flicker, and as I left her I expected her to die in a few minutes.

In spite of the excessively gloomy outlook the patient slowly rallied during the next 24 hours, as suggested by the following table made up from 2 p.m. (about an hour after the cæcostomy):—

| | | |
|---|---|---|
| July 31.. | 2 p.m.: Pulse, 160; Resp., 56; Temp., | 100.2° |
| | 10 p.m.: Pulse, 156; Resp., 50; Temp., | 96°. |
| Aug. 1 .. | 6 a.m.: Pulse, 160; Resp., 40; Temp., | 97.4°. |
| | 10 a.m.: Pulse, 140; Resp., 40; Temp. | 96°. |

For the succeeding few days the condition remained very poor, but thence onwards the progress to recovery was assured, the tongue on the fifth day being quite clean, and the patient cheerful, and taking fish.

Sister Ross supplies the following table:—

| | Proctolysis. | Cæcostomy Drainage. |
|---|---|---|
| First 24 hours .. .. | 5½ pints .. | 4 pints. |
| Second 24 hours .. .. | 2 pints .. | 3¾ pints. |
| Third 24 hours .. .. | discontinued .. | 3 pints. |
| Fourth 24 hours .. .. | discontinued .. | 1½ pint. |

The cæcal fistula in this and in the preceding case will, if necessary, be closed in a week or two by the simple method described by Dr. Frank Nyulasy, of Melbourne, in the "Intercolonial Medical Journal of Australia," some years ago. Incision surrounding the fistula pass to the parietal peritoneum, the fistulous track is removed, and the cæcal orifice closed without opening the peritoneum. F. Nyulasy did his first case under local anæsthesia.

The remarkable recoveries in the foregoing cases supply further proof that drainage of the intestine must stand as a principle of surpassing value in the treatment of acute peritonitis. I would again urge its early and systematic employment, not merely in cases of toxæmia from paralytic obstruction due to extensive or to generalized peritonitis, but in that large group in which there is reflex paralytic obstruction and toxæmia from a localised and limited peritonitis. If this view were generally accepted, and acted upon with promptitude, we would, I am convinced, have made a striking and most beneficent advance in the treatment of acute septic peritonitis.

## A CASE OF COMPLETE HEART BLOCK.

By **Helen Kelsey, M.B.,**

House Physician, St. Vincent's Hospital, Melbourne.

J.W., male, aged 68 years, was admitted to St. Vincent's Hospital on July 13th, 1914, under the care of Dr. L. S. Latham, complaining of fainting attacks. He believed himself to have been a perfectly strong man until a year ago, when he had an attack of influenza. He got up before he had fully recovered, and suffered a relapse, and from that time the fainting attacks began. At first he would feel as if he were falling from a height, this sensation lasting for a second or two, and then passing off. These fits have been gradually increasing in severity, until he now becomes quite unconscious.

He describes two separate feelings before the attacks. In one he has the sensation of falling from a great height, and there is a sound in his ears like air rushing through a pump. In the other a "sensation" comes up his spine, and divides into two at his neck seeming to crush his head. So far the attacks only come on while he is sitting or lying down, never when he is at work. Beyond the attacks he feels perfectly well. There is very little dyspnœa, no swelling of the legs, no palpitation.

There is no history of rheumatism of any kind, and no previous illnesses, except influenza. There is no history of specific disease, and the patient is a moderate drinker and smoker.

On examination, it was found that the patient looked healthy, and there was no cyanosis. His pulse-rate was 24 on admission, but almost immediately dropped to 20.

Heart.—The apex beat was in the fifth interspace, just inside the nipple line. There was a loud systolic murmur replacing the first sound, the second being scarcely audible. Over the third and fourth interspaces and lower left border of the sternum a muffled sound could be heard at regular intervals, quite independently of the sounds at the apex. A systolic murmur was heard at the aortic cartilage, and the second sound was not quite clear.

The jugular veins were distended, and pulsated regularly about four times to every apical beat.

Lungs.—Nothing pathological was found, except a few moist sounds at the left base. There was no œdema of the legs.

During the first two days in hospital the patient felt quite comfortable and well. He was given belladonna in large doses, with a view to removing vagal inhibition and

increasing the pulse-rate, but without effect. He was then given a mixture containing tincture of digitalis min. xv., tincture of belladonna min. iv., and liquor strychn. hydrochlor. min iv., three times a day, but also without effect on the rate of the heart-beat.

Three days after admission he had two slight syncopal attacks, being unconscious for about two minutes. His pulse at this time was 17 beats per minute.

A polygraph tracing was taken by Dr. Silberberg a portion of which is appended.

The radial tracing shows a number of waves corresponding to systolic contractions. The diastolic intervals vary in time, the number of seconds taken by each being marked. The longest period shown is 4 and 4-5th seconds, but one interval amounted to 6 and 4-5th seconds, during which there was no sign of syncope. There is no indication in the radial tracing of the auricular contractions.

marked I., II., etc., the "a" wave is seen gradually to approximate to the "c" wave until there is a summation of the two at III., and then gradually to become separated from it again.

The apical tracing is interesting, as it shows a series of small waves corresponding to the "a" waves in the jugular.

It was unfortunately impossible to take an electrocardiograph tracing.

A skiagram of the patient was taken, and the heart appeared to be somewhat enlarged transversely. The auricle could be seen beating rapidly at the rate of 80 per minute, and the ventricle also beating forcibly, with a quite independent rhythm at the rate of 18 per minute.

The patient was in hospital for twelve days, during which time he seemed well, and suffered in no way, except for the syncopal attacks, which gradually decreased in number.

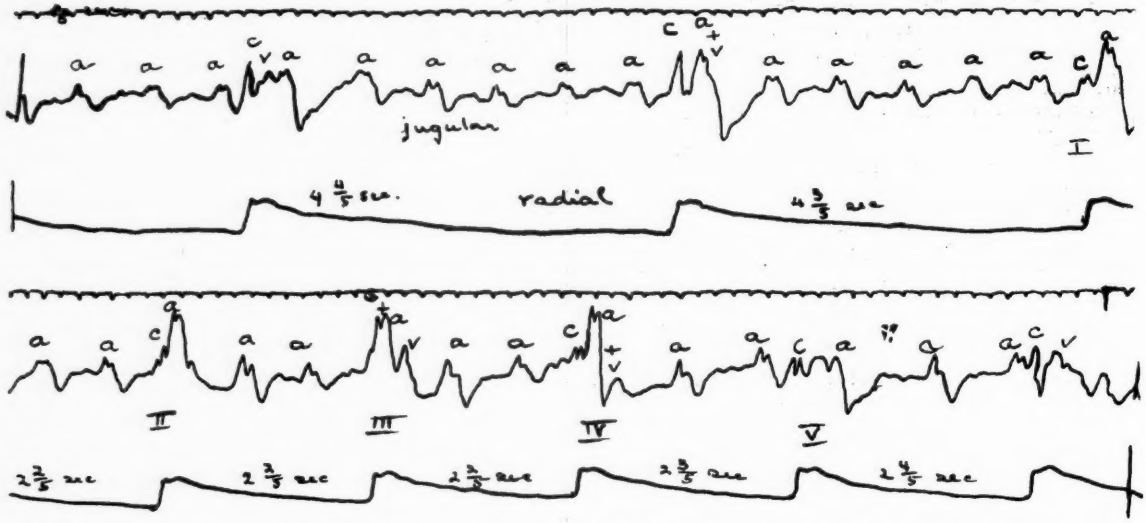



Fig. I. (The second line being an uninterrupted continuation of the first.) Jugular and radial pulses taken simultaneously.

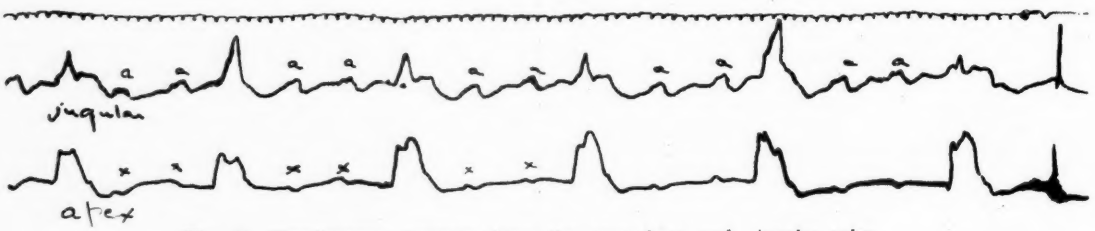



Fig. II. Simultaneous tracings from the apex beat and jugular pulse.

In the jugular tracing there are a number of "c" waves corresponding to the ventricular systoles in the radial. Between these are a varying number of "a" waves, corresponding to the auricular contractions. They vary in frequency from two waves to each ventricular beat up to six waves to each beat.

There appears to be no connexion between the auricular and ventricular systoles, and they present a constantly varying relationship. For example, in the groups of waves

During the last three days he had none. At no time did his pulse exceed 24, the lowest rate observed being 17 beats per minute. After leaving the hospital, he journeyed to his home by train, a distance of some two hundred miles, with no untoward results.

I am indebted to Dr. L. S. Latham for permission to report this case, and to Dr. Silberberg for allowing me to make use of the tracings.

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The President and Secretary of the Pharmaceutical Society of Queensland waited on the Home Secretary on October 28, 1914, for the purpose of calling his attention to the fact that Friendly Societies were taking advantage of certain privileges in entering into unfair competition with chemists and other traders. It was urged that provisions against this abuse should be included in the Friendly Societies' Bill. By paying a nominal subscription Friendly Societies obtained the right to trade as pharmacists. A case was cited in which a combination of Friendly Societies had obtained permission from the Attorney-General of holding an art union for the purpose of raising funds to establish a pharmacy, and thereby to compete with established chemists. The Home Secretary promised to give the matter his careful consideration, and expressed the opinion that the deputation had made out a good case.

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## The Tuberculosis Problem.

In the present issue will be found two very able contributions on the tuberculosis problem. Dr. Latham undertakes the task of setting forth the clinical value of artificial pneumothorax in the treatment of phthisis, according to his considerable experience of this procedure, and Dr. MacLean gives a clear and valuable account of the measures employed in a well equipped sanatorium, and of the immediate results obtained by these measures. Last week we published an abbreviated account of an important discussion on the value of tuberculin as a means of treating pulmonary tuberculosis. In this discussion, Dr. Finckh has attempted to champion the views enunciated by Professor Sahli, of Berne, while other speakers offered criticism to the views expressed, and substituted various opinions from those originated by Koch and his followers to those held by the more modern school of clinicians. The subject has been furthered by the ventilation of these various views and experiences, but its solution has not yet been attained. A close analysis of the aspects presented will demonstrate that a few facts have been proven, and that much speculation in regard to other points exists. Everyone is agreed that tuberculosis is extremely widespread, but that the infections are not necessarily followed by clinical manifestations of the disease, and that every person who harbours a few tubercle bacilli at one time or another does not necessarily require treatment. Naegeli was the first to demonstrate that 96 per cent. of persons dying between the ages of 16 and 60 showed some healed, latent or active tuberculous lesions post mortem. Hamburger and von Pirquet were able to demonstrate that the post mortem finds tallied to a greater or lesser extent with an intra vitam reaction to tuberculin, when applied either subcutaneously, cutaneously or ophthalmically. The next fact that is not disputed is that infection takes place in a large proportion of cases early in life, and that, whether this infection be followed by signs of disease or not, children after the age of three years can be made to react to tuberculin. It is not questioned that tuberculosis tends in a large number of instances to heal spontaneously. Mild infections, which are at the same time followed by mild affections, rarely need treatment, although it is often impossible to determine in a given case whether the disease will progress or come to a standstill spontaneously. Before we can be certain of anything connected with tuberculin or with other methods of treatment, it is absolutely essential to consider the data which have been collected in regard to the immune processes going on inside the tubercular organism, and to ascertain what takes place in the course of spontaneous cure. Nothing but confusion will result if this step be passed over, and the assumption made that tuberculin and living tubercle bacilli are identical. Not many years ago von Behring evolved his ingenious theory of the infantile infection of tubercular subjects. A curious experimental fact serves to support this view, and to throw some light on the processes involved in infections in human subjects. It is well recognized that guinea-pigs react to living tubercle bacilli with a regularity and certainty seldom met with biologically. These highly susceptible animals can be so infected with little virulent strains of bacilli in small doses that they recover after a more or less marked illness. If these animals be re-infected at a later date, instead of an acute miliary affection following, the disease assumes a chronic form, and the chief pathological signs take the shape of cavity formations in the lungs. If this biological phenomenon be translated from the guinea-pig to man, it would appear as if an infection takes place in infancy which may be manifest or not, according to the natural resistance against the bacilli, and the number and virulence of the infecting bacteria. When recovery takes place and is more or less complete, a second infection after puberty results in a chronic form of disease which is characterized by localization in the lungs and the formation of caseating cavities. Various explanations have been offered for this phenomenon. It is obvious that a partial immunity has been effected by the primary attack. Much, as stated by Dr. Mills, produced a partial immunity in guinea-pigs by injecting tubercle bacilli treated with acids. The "Aufschliessung," or dissociated products of the bacilli, appear to stimulate the body fluids to produce antibodies which act di-

rectly on intact tubercle bacilli; in other words, a bacteriolytic power is awakened within the body. Whether a primary mild infection in infancy leaves this power behind, or whether the partial immunity is of a different character is mere speculation. That some immunization process is at play seems certain. Various investigators have attempted to drive this immunity farther, but have failed. Marmorek claimed some years ago to have protected guinea-pigs against infection by the injection of the young forms, but the evidence was poor, and the proof has not been accepted. Nathan Raw supposed that an infection with human forms protects against bovine bacilli later on, but this view is regarded as theory, and no convincing proof has been forthcoming.

Koch's original conception of the action of tuberculin was based on the assumption that the tubercle bacilli or their dissociation products were capable of calling forth antibodies in the organism which would act on the infecting bacteria. Later, when he was forced to recognize that there was but little support to this theory, he conceived a view which had not been disproved up to to-day, but the significance of which has been variously interpreted. He assumed that tuberculin caused a change in the tuberculous tissue, robbing the organisms of a suitable soil for propagation. He spoke of a necrosis, but necrotic changes have not been found with any constancy. Changes, however, have been made out both as an immediate result of the injection and as the ultimate fate of the affected parts. The second experiment of which Dr. Finckh speaks is capable of another explanation than that given by him. The second infection in guinea-pigs is at times signalized by a flat ulceration at the site of injection, without any local extension to the neighbouring lymph glands. It is difficult to understand clearly what is meant by an acute exudative inflammatory response to tuberculin in the neighbourhood of a newly developed tubercle in an already tuberculous animal. This explanation is supposed to be something different to a local immunity phenomenon. We must admit that it appears to us to be evidence of some degree of immunity, but that the explanation is singularly lacking in clearness. On the other hand, the phenomenon described by Arthus in connexion with anaphylaxis bears a strikingly close resemblance to the occurrence described by Koch. How is this to be interpreted? That some biological process is involved may be assumed, since the essentials are a tubercular infection pre-existing, and a super-infection or inoculation. Much's experiments were conducted with bacilli which were subjected to the action of organic acids. Tuberculin takes the form of either an emulsion of dead and disintegrated bacilli or of killed cultures in akaline bouillon filtered and concentrated. Arthus's phenomenon was originally demonstrated with horse serum, and can be repeated with pure crystalline egg albumin or other protein. The common ingredient in all three cases is a protein undergoing some form of proteolytic change. Moreover, the recent researches in hypersensibility tend to show that the toxic substance includes an amino-acid in combination with the antibody formed within the organism as the result of the first injection of the antigen, and not necessarily the whole protein molecule. It would therefore appear as if the cause of the change in the tuberculous tissue resulting from the injection of tuberculin is a split product of the protein contained in the tubercle bacillus. Whether the reaction is truly specific or not must be demonstrated experimentally, but it may be well to call attention to the fact that, while there is no evidence to show that a tubercular focus undergoes changes only in response to tuberculin, there is some experimental evidence to suggest that this is not so, but that several other proteid substances in an unstable condition can produce identical local and general reactions in a tubercular organism.

These considerations would tend to suggest that tuberculin therapy is only partly specific, and that hitherto only a partial, incomplete immunity to tuberculosis has been produced. But tuberculosis is a recoverable disease; given a reasonable and favourable chance, the body has means of freeing itself of the infecting bacilli. It may be that a partial, local immunity may suffice to build up a wall around the tubercles behind which the bacilli are imprisoned; it may be that specific, or partially specific, immune bodies keep the invading bacteria in check. In either case, it will be wise if no great reliance is placed on the immunizing powers of the

tubercle bacilli or their products, and if all therapeutic attempts are mainly directed toward the assistance of the body to overcome by its inherent, natural powers the destructive effects of the growing tubercles. It has probably never been suggested that the resistance of an average organism to an invading tubercle bacillus is due to specific, newly-formed, immune bodies, in those cases in which signs of disease are never manifested. A successful method of treatment of clinically evident tuberculosis should therefore be directed toward the increase of natural resistance rather than based on the production of an artificial one. Whether artificial pneumothorax, thoraco-plastic, division of the first rib, or other surgical procedure is likely to effect such a result must be highly doubtful, and in view of the very varying results obtained by open-air treatment, over-feeding, graded work, tuberculin and any one of the many other means employed at present, it is probable that we have not yet attained the full knowledge of the nature of spontaneous arrest of the disease, and that these remedies at best are merely palliative. Progress will be made if we begin again, and test the truth of each item of what passes as knowledge to-day.

## STATE REGISTRATION OF NURSES.

The policy of the British Medical Association in regard to the protection of the public in its relations to the medical and nursing professions is very definite. The only guarantee which can be offered that the standard of medical and nursing attendance is as efficient as modern teaching admits of is to place the two professions under the control of a special board, which shall have the power of publishing the lists of persons registered, and of removing names from the lists when evidence is produced that the persons concerned are either incompetent or of bad repute. The principle involved, if carried to its logical conclusion, would include an absolute prohibition of all practice by unregistered persons. Sooner or later, the demands of the medical profession and of the nursing profession in this respect must be recognized, and the care of the sick will then be placed exclusively in the hands of doctors and nurses who have been found to possess knowledge and skill necessary to render their services safe and beneficial. Matters have, however, not yet reached this stage; the medical and the nursing professions have not yet proved to the public and to the legislature that the standard of efficiency of their members is sufficiently high to warrant this claim. On the other hand, there is no doubt whatsoever that the public interest is not being properly safeguarded as long as any impudent and ignorant charlatan who choses to seek a livelihood by pretending to treat disease or to tend to the comfort and safety of the sick is permitted to do so.

We have found it necessary to urge the general adoption of a State registration of nurses in the various States of Australia. Unfortunately, this cannot at present be adopted on a uniform plan. Were the federal spirit more advanced and the advisability of setting up a federal body to look after the health conditions of the whole Commonwealth admitted, more rapid progress would be made in connexion with these matters. As it is, a State registration of nurses has been introduced in Queensland, is being considered in Victoria and has some prospect of being introduced within a short time in New South Wales. In 1910, Dr. Mackellar sought leave to introduce into the Legislative Council of New South Wales a Bill to provide for the registration of nurses qualified to practise in New South Wales. Like the majority of private members' bills, this measure failed to secure the attention it merited. We have reason to anticipate that this Bill will now receive the favourable consideration of the two houses and also of the Government. The Bill is a very simple one, and bears a considerable resemblance to the Bill introduced into the House of Commons in 1906 by the present Governor-General of Australia. In Dr. Mackellar's Bill, a Nurses' Registration Board is provided for, to consist of ten persons to be appointed by the Governor, and to include the President of the Board of Health (to be ex officio Chairman of the Board), two qualified medical practitioners (who shall be upon the active staff of metropolitan general hospitals), two past or present matrons of general hospitals, one past or present matron of a hospital for the insane, and one past or present matron of a midwifery hospital, one representative nominated by the Council

of the Australasian Trained Nurses' Association, and two lay members. The composition of this Board might be amended with advantage. In the Bill referred to above, the Board consisted of one person appointed by the Privy Council, one registered medical practitioner appointed by the General Medical Council, one registered medical practitioner appointed by the British Medical Association, and one registered medical practitioner appointed by the Medico-psychological Association; three past or present matrons of hospitals or infirmaries, appointed by the Matron's Council of Great Britain and Ireland, one past or present matron of a public asylum for the insane, appointed by the Asylum Workers' Association, one nurse appointed by the Queen Victoria's Jubilee Institute for Nurses, one nurse appointed by the Royal British Nurses' Association, and one nurse appointed by the Society for the State Registration of Trained Nurses. The difference between the two bodies is striking. In the British Bill, introduced by a liberal member of the British legislature, the principle of representation of the whole of the two professions mainly concerned is embodied. In the Australian Bill the only attempt at a democratic basis lies in the provision of two representatives of the laity. The modification which is desirable would be that the medical profession should be represented by members nominated by the New South Wales Branch of the British Medical Association, and that the restriction that the representatives should be on the active staff of metropolitan general hospitals be removed. If the interests of the profession and of the general public are to be safeguarded, it is essential that the best man available be chosen, quite apart from the question whether he holds this post or that. In the next place, the general body of nurses should have direct representation. In addition to the nominee of the Council of the Australasian Trained Nurses' Association, there should be two nurses appointed on the nomination of the nurses themselves, either through the organization of the Association or by a plebiscite. This would entail an increase of the Board by two members, but twelve is not so large a body as to render it unwieldly. The duties of the Board under the New South Wales Bill are practically identical to those embodied in the Munro-Ferguson Bill. In addition to the framing of rules for the satisfactory carrying out of its functions, the Board is to appoint examiners, decide where the examination shall be held, appoint a registrar, determine upon the suspension of any nurse from practice as a registered nurse, or the removal from the register of the name of any nurse for disobeying the rules or for other misconduct, or decide upon the restoration to the register of the name of a nurse so removed, issue or cancel certificates and the like. There is a penal clause which is quite adequate and just, and the clauses governing the admission to the register are clear and incisive. Within the first year, a nurse who is in possession of the certificate issued by a recognized hospital that she has undergone a three years' course (or in the case of obstetric nursing a course of instruction of twelve months), or who can produce certificates from two medical practitioners to the effect that she has been in practice as a nurse for at least three years, and holds a good character, or who is a member of a recognized nursing association, is entitled to registration. Registered nurses shall be permitted to wear a distinctive badge, and any woman who takes or uses the title of registered nurse, of hospital, general or mental nurse, of midwife midwifery nurse or obstetric nurse without having been registered, or who wears the distinctive badge or a similar badge, shall be liable on summary conviction to a fine. The Bill is drafted in such a manner that the public will be able to discern who is a reliable, trained nurse, and by refusing to employ unregistered women a very large amount of quack and dangerous practice will be eliminated. Its rapid passage through the legislative chambers will effect a material advance in the progress of nursing and in the protection of the public.

## ANOTHER MELBOURNE INQUEST.

The Melbourne City Coroner appears to delight in delivering curtain lectures to the younger members of the staff of the Melbourne Hospital. Unfortunately for the Melbourne City Coroner, the views expressed in some of these curtain lectures fail to reach home on account of their impracticable and unjustifiable nature. On October 25, 1914, the learned Coroner held an inquest on one William Dunlop, who had died of cerebral hæmorrhage on October 17, 1914, after having been in the hospital for about a fortnight. From the evidence given at

the inquest, it appears that Dunlop got very drunk on October 3, and abused the woman with whom he was living. A man came to her assistance and shook his fist in Dunlop's face, with the result that the latter fell down and hit his head against the ground. He was taken by ambulance to the Melbourne Hospital. Dr. C. Alwyn Stewart received Dunlop at about 6.20 p.m. on the same day. There was a slight cut over the back of the head, and the man was suffering from the effects of alcohol. At a quarter to nine o'clock the patient was discharged in the care of a policeman who took him to the station and locked him up on a charge of being drunk and disorderly. On the following day the prisoner appeared to be ill; he shivered and spoke incoherently. During the course of the day he appeared to get worse, and was accordingly taken back to the hospital. At that time his pulse was rapid, and he appeared to be muddled. During the first week of his stay in the hospital he was fairly bright, but later he became drowsy, and showed marked cerebral symptoms. At the post-mortem examination a linear fracture of the skull was discovered, with traces of an old hæmorrhage of small dimensions. In addition, there was a fresh secondary hæmorrhage, from which death took place. The Coroner, in his summing-up, stated that the man died of fracture of the skull and laceration of the brain. "It was an error in judgment," the Coroner said, "on the part of the doctor to order the patient to be taken from the hospital. Even where drunkenness was most obvious, if there was a suspicion that a man was suffering, he should be given the benefit of the doubt and detained at the hospital for observation." The Coroner criticized the young practitioner, and suggested that the death was due to his want of experience. The hæmorrhage which killed the man did not develop until the second week of Dunlop's stay in the hospital. The Coroner's opinion that the man died of fracture and laceration is therefore not in accordance with the facts as elicited at the post-mortem examination. Every casualty surgeon has had experience of fractured skulls in drunken subjects which are not accompanied by any cerebral symptoms beyond those of alcoholism. That this patient was not lightly turned away is shown by the fact that he was admitted before 6.30 o'clock in the evening, and was handed over to the police shortly before nine. During the three hours he was under close supervision by a competent qualified medical practitioner, and did not show any sign of a cerebral lesion, whereas he did exhibit the signs of acute alcoholic intoxication. If the Coroner's advice were acted on, the Melbourne Hospital would have to be enlarged to a very considerable extent, in order that every drunken person with a scratch on his scalp might be kept in the hospital under observation until all traces of the alcoholism had passed off. It must further be pointed out that the patient was brought to the hospital without any history of a serious fall. Had it been reported to the medical officer in charge that the man had fallen in such a manner as to render it likely that he had sustained injury to his skull, he would undoubtedly have been detained, even in the absence of any cerebral symptoms. No hospital is large enough or rich enough to house every drunken man brought in.

These mistakes on the part of the Coroner could be pardoned, although they should not have been made. But to attribute the death of the patient to the want of experience of the medical officer is so serious a charge that the Coroner should be required to justify the accusation. Ignorance in a medical practitioner which leads to the death of a patient is criminal, and the logical sequence of his remarks would have been that Dr. Stewart should have been arrested on the Coroner's warrant. The evidence which would have been required to substantiate such a charge would have been that had some form of treatment been applied within the first 24 hours following the accident the patient might have recovered. The post-mortem find clearly proves that no treatment would have made any difference in the issue. Moreover, even if some form of treatment, such as trephining, had been indicated but had not been resorted to, it would have been necessary in our suppositious case to prove that the omission was one of criminal ignorance or negligence, and not one of an error of judgment. We are therefore of opinion that the remarks passed by the City Coroner of Melbourne to Dr. C. Alywn Stewart in this case were quite unpardonable.

## THE SHORTAGE OF DRUGS.

The Council of the Pharmaceutical Society of New South Wales has called the attention of the medical profession to the fact that the shortage of drugs at the present time affects to a large extent those of German origin. The Society suggests that practitioners could overcome the difficulty without any serious detriment to the treatment prescribed. They point out that many of the German drugs can be replaced by reliable preparations which appear in the Australasian Pharmaceutical Formulary. As an instance, they cite the patent preparation of "lysol," which can be replaced by the compound solution of cresol (liquor cresolis co.). It would be well if medical practitioners would learn in this emergency not to use patented or protected preparations when equally active substitutes of known formulæ are available.

## THE ADULTERATION OF MILK.

Wellington, New Zealand, is getting a bad reputation in regard to the purity of it milk supply. We learn that the Dominion Analyst, Dr. J. S. Maclaurin, states that no improvement has been effected during the past year. Out of 333 samples, no less than 44 were adultered with water. The greatest proportion of added water found in one sample amounted to nearly one-quarter of the total volume. The average worked out at 8.03 per cent. Two samples were deficient in fat, and one contained boracic acid as a preservative. On the basis of the results of his analyses, Dr. Maclaurin estimates that 31,600 gallons of water of doubtful quality were added to milk in one year. This would represent the sum of £2,106, the milk being sold at 4d. per quart.

# Abstracts from Current Medical Literature.

## OPHTHALMOLOGY.

### (193) Stellate Keratectomy for Anterior Staphyloma.

S. L. Ziegler ("Journ. Americ. Med. Associat.," Sept. 5, 1914) finds that when a protruding but circumscribed corneal ectasia has proved to be more or less obstructive to vision, provided that the remaining tissues of the globe have not been seriously affected, some conservative surgical procedure is required to preserve a mobile globe, and to secure useful vision. He had devised an operative method for those cases in which a limited portion of the cornea is staphylomatous. This he calls his "trefoil keratectomy." When the whole cornea is involved, a four-leaf flap is required, and the procedure is then termed "stellate keratectomy." He gives full details of three operations, namely, trefoil keratectomy with the scissors, the same with the punch and stellate keratectomy with the scissors and the punch. The first stage of the trefoil operation consists in passing the Græfe knife horizontally through the base of the staphyloma, from the temporal to the nasal side. The blade is not allowed to emerge until the aqueous fluid has completely escaped. The second stage is performed by inserting the blade of the scissors beneath the upper margin of the horizontal incision and making a long vertical incision. A second convergent cut is then made to the left of the centre to form a V-shaped incision and opening. In the third stage, the two corners of the opposing wound margins are grasped by forceps and a triangular piece excised from each corner, thus forming a three-cornered opening. Lastly, the vertical wound is closed, and then the horizontal one is also sutured. The punch operation is performed in a somewhat similar manner. The stellate operation is performed as follows: A horizontal incision is made in the centre of the cornea with a Græfe knife or keratome. The upper and lower vertical flaps are excised with the scissors or punch. Then the horizontal flaps are excised. Lastly, each section of the stellate incision is closed by a single suture, and a central mattress suture is inserted. The after treatment consists in the application of mercuric chloride ointment to the conjunctival cul-de-sac and of a cresol compress kept in place by a light bandage. A slow healing wound may be touched with a weak solution of silver nitrate, and a gaping one with the hot galvano-cautery.

### (194) Hemiopic Pupillary Reaction.

C. B. Walker ("Journ. Amer. Med Associat.," Sept. 5, 1914) decribes a new instrument for the examinatior of the hemiopic pupillary reaction, and gives full details of its use. From the observations made with this instrument and with Wilbrand's test, he comes to the following conclusions. A weak hemiopin pupillary reaction may be masked by the pupillometer light when observed consensually. Light and dark adaptive phenomena, in addition to dispersion light, seriously complicate the reaction. The reaction is definitely present in anterior lesions, when examined by the rotary shutter method. The hemiopic pupillary reaction is also present in cases having every clinical evidence of being purely posterior cases, although post-mortem examination is necessary to prove that there is no involvement of the optic tract or the primary ganglion centres. Although it may be concluded from the examination of these cases that the peripheral retina possesses a weak pupilo-motor sensitiveness, there is no evidence that the hemiopic pupillary reaction has any topical diagnostic value.

### (195) Extraction of Immature Cataractous Lens.

H. E. Smith ("Journ. Americ. Med. Associat.," Sept. 5, 1914) has come to the conclusion that an ample, properly executed preliminary capsulotomy has certain advantages over immediate capsulotomy or capsulectomy. This applies to mature cataract. In Morgagni's cataract, this procedure enables the surgeon to perform an efficient operation with ease. He is further of opinion that the extraction of the clear lens in high myopia is feasible by this method. By its performance, it renders immature cataract operable after an interval of six hours, and a clean extraction can be reckoned on. He records that 180 cases of immature cataract were treated by various ophthalmic surgeons by preliminary capsulotomy followed by extraction. Of these, 164 (i.e., 91 per cent.) were successful. A total failure was met with in 5 cases and a partial failure in 11.

### (196) Chronic Dachryo-cystitis.

In describing the condition of chronic dachryo-cystitis, James McGillivray ("Canada Lancet," Sept., 1914) points out that the patient complains of water standing in the eyes, which prevents him from seeing clearly. Tears stream down the cheeks on the least exposure to dust or wind. The lachrymal sac is found to be fuller than normal, and pressure on this region forces mucus or pus through the puncta. Associated with this condition, chronic conjunctivitis, blepharitis and ectopion are met with. The condition never improves, and the consequent epiphora is a great discomfort to the patient. The lachrymal sac presents a good soil for the growth of bacteria, and if an abrasion of the cornea be present, serious results may follow. The treatment which has proved of value in this condition consists in the removal of the lateral wall of the sac performed by the intranasal method. The canaliculus is first slit upon, and cocaine and adrenalin applied. An incision is then made at the tip of the middle turbinate forwards and downwards for about one half of an inch. The mucous membrane and periosteum are divided. The knife is then turned at right angles and directed downwards for a quarter of an inch. A lower cut is then made, so that a quadrilateral flap results. A small window is then dissected out in the lower angle of the flap. The bone is then exposed and chiselled away. By this means the lachrymal sac is exposed, and the whole lateral wall cut away after it has been seized with a pair of forceps.

### (197) Phlyctenular Ophthalmia.

In discussing the ætiology of phlyctenular ophthalmia, Theobald (Journ. Amer. Med. Association, Aug. 5, 1914) analyses the evidence adduced in favour of the theory that this condition is of tubercular origin. The arguments used do not appear to the author to be acceptable. It is stated that between 70 and 90 per cent. of persons suffering from phlyctenular conjunctivitis give a positive reaction to tuberculin, especially when applied by von Pirquet's method. He suggests that approximately the same percentage of healthy subjects yield a positive von Pirquet reaction. In the next place, it is stated that tuberculin is efficacious in the treatment of the disease. Theobald denies this, and states that some ophthalmic surgeons have found that tuberculin proved disadvantageous to the atropine and other local treatment. The supporters of the tubercular origin state that phlyctenular conjunctivitis and keratitis develop after the application of tuberculin to the eye. The author considers that this occurrence is extremely rare, and when it does occur is due to the mechanical irritation of the tuberculin. To the suggestion that phlyctenular ophthalmia of focal reaction follows injections of tuberculin carried out for diagnostic or therapeutic purposes, he replies that this development is extremely rare, and is due to the constitutional disturbances produced. In the last place the chronicity of this affection, its tendency to recurrence, and the predilection for those in whom the so-called strumous diathesis is manifest, is regarded as evidence of a tubercular nature. Theobald considers that it is merely proof that the condition is due to general debility. Eyre has shown that while tubercular affections in other parts of the body have been observed in subjects suffering from phlyctenular ophthalmia, there is no evidence that this condition is tubercular, and tubercle bacilli have never been found in the phlyctenulæ. Theobald regards the condition as an ocular eczema due to intestinal intoxication.

### (198) Workmen's Compensation in Eye Injuries.

Robinson ("The Ophthalmoscope," September, 1914) opened a discussion at the Oxford Ophthalmological Congress by dealing with workmen's compensation in eye injuries. He spoke at some length on traumatic neuroses and malingering. The patient may suffer from acute and chronic shock,

which is at times called acute or chronic neurasthenia; or there may be an hysterical attack or chronic hysteria. These patients usually resent examination, complain bitterly of pain and tenderness, present contradictory symptoms and behave quite unlike persons do who are anxious to get well. He was of opinion that the number of pure malingerers was small, possibly not more than 0.5 per cent. He employs the usual tests for the detection of simulated blindness. The author considers his subject from the point of view of the applicant's statement, from the point of view of objective signs, and lastly from the point of view of the opinion formed of the signs and symptoms. This opinion is based on the connexion between the alleged accident and the condition found at the examination. It should include an estimate of the future duration of any disability found. The problem of persons with one seeing eye is discussed, and the disadvantage suffered by workmen through the loss of stereoscopic vision is fully entered upon. In conclusion, Robinson points out that in his opinion no certificate should be given at an eye hospital by a member of the staff in his hospital capacity, but that the report should be drawn up by the ophthalmic surgeon in his capacity as a private practitioner. In the discussion, Angus Macnab (ibid.) stated that the most interesting problem to the ophthalmic surgeon was the determination of the compensation for partial disablement. He had followed the careers of several workmen who had lost one eye, while the other remained normal. He had never met with a single one who had to be content with a smaller wage than he had previously received. The only basis for compensation admitted under the Act was on account of loss of wages. The risk of damage to the other eye was very slight. One large insurance company had only been called upon to meet a claim on three occasions during the course of 15 years on this account. This company did not charge any extra premiums to a one-eyed man. When the remaining eye was defective, the matter became more difficult to determine. Compensation up to 50 per cent. of the wages lost was allowed under the Act. The payment of a lump sum appeared to have an extraordinary effect on the wage-earning capacity of the injured workman. He was greatly impressed by the moral deterioration which followed idleness, and always advised as early return to work as possible, even if the work was only part time or light. He was convinced that real benefit accrued from a return to even light work after five months' rest following a traumatic cataract. He agreed with Robinson that this form of compensation work should be kept quite apart from hospital practice. Evans (ibid.) spoke of the tendency of the surgeon to exaggerate the disabilities of workmen who had lost one eye. They should be encouraged that they will do their work quite as well with one eye as with two. He was not aware of the existence of any statistics showing the visual acuity required for the performance of the various trades. It was therefore quite impossible for a surgeon to determine the minimum visual acuity for any particular form of work. Malingering was, in his opinion, greatly on the increase during the last few years. He suggested that all workmen's eyes should be examined when they were applying for employment.

## LARYNGOLOGY AND OTOLOGY.

### (199) Suspension Laryngoscopy.

D. Mackenzie ("Lancet," September 4, 1914) records an interesting case of the removal of a foreign body from the larynx by Killian's method of suspension laryngoscopy. The patient was a child aged two years, who swallowed a piece of meat and was seized with symptoms of laryngeal obstruction. The mother hooked the meat out of the throat, and the symptoms were relieved. On the following morning, however, the child's breathing became stertorous. She was taken to a hospital, where she had an attack of asphyxia, and where she developed genuine bronchitis. The author saw her later after laryngeal stridor had developed. Tracheotomy was required at once. As a foreign body in the larynx was suspected, the child was examined by Killian's method. Great difficulty was experienced on account of a very short epiglottis, which rendered the retractor almost useless. The difficulties were overcome, and, after a time, a piece of rabbit bone half an inch in length was removed from the larynx, where it had been embedded for several months. No general or local anæsthetic was used. McKenzie found it possible to carry out this procedure without any preliminary anæsthesia, and by substituting a probe for the retractor.

### (200) Intrinsic Cancer of the Larynx.

St. Clair Thomson ("Journ. Amer. Med. Associat.," Sept. 19, 1914) believes that the results of the treatment of laryngeal cancer by laryngo-fissure are better than the results obtained in cancer of any other part of the body. He has not lost a single patient from the operation, and in 80 per cent. of his cases, freedom from recurrence remained. Surgeons were a little sceptical in regard to the results of endo-laryngeal operations. He was able to present definite proof of the complete removal of an intrinsic cancer of the larynx through the mouth. This result, he admits, was quite unintentional, and he does not suggest that laryngo-fissure should be given up in favour of endo-laryngeal methods. The case in question presented a reddish, cauliflower growth on the right vocal cord from the anterior commissure to the vocal process. The author proceeded to remove as large a portion of the growth for miscroscopical examination as possible under cocaine with a Morell Mackenzie duck-bill forceps. As the tumour was very tough, he removed it by evulsion. The histological characters were typical of papillomatous and epitheliomatous tissue. At a later date the patient was subjected to laryngo-fissure, and the remains of the cord were removed. On miscroscopical examination it was found that no traces of malignant disease was present. The author deduces from this case that cancer of the vocal cords is a very slowly growing and limited process, which can be diagnosed at a very early stage by the persistence of hoarseness. The diagnosis is based chiefly on the appearance of the larynx and only when the growth is superficial and not infiltrating can it be confirmed by microscopical examination. The growth, even when it occupies almost the entire length of the cord, may at times be completely removed by endolaryngeal operation. The completeness of the operation, however, can only be determined by a subsequent laryngo-fissure and the examination of the portions removed. Laryngo-fissure is therefore the operation for all cases of laryngeal cancer. The operation in itself is not dangerous, and its results are highly satisfactory.

### (201) Foreign Bodies in the Larynx.

E. D. Davis (Lancet, August 22, 1914) records a series of cases of swallowed and inhaled foreign bodies to demonstrate that it is easy to make an inaccurate diagnosis, and that the resulting delay may have serious consequences. A very thorough examination should be carried out whenever articles are alleged to have been inhaled or swallowed. When the object is not found the bronchoscope and œsophagoscope should be employed. These instruments are not difficult to use, and are far superior to the obsolete bougie, probang or coin-catcher. He speaks enthusiastically of Killian's suspension laryngoscopy. He is of opinion that in no class of medicine or surgery is greater satisfaction obtainable by methods of treatment than in those concerned with the successful removal of a foreign body from the œsophagus or air-passages.

### (202) Otology in 1913.

Macleod Yearsley ("Brit. Journ. Children's Disease," April, 1914) publishes a retrospect of otology in the year 1913. He states that nothing of exceptional note has to be recorded. In regard to anatomy, Cavanaugh dealt with the tympanic cavity, and Stewart with the mastoid. From the clinical side, Haskin has dealt with the ocular manifestations in nasal and aural disease, W. Wood with the Custachian tube and naso-pharynx, and M. Yearsley with errors in diagnosis. Otitis media has received attention from Hammond, Alexander and Prendergast and Scholtz. A long list of papers have appeared on the subject of mastoid surgery, while intra-cranial complications of middle ear suppuration and non-suppurative middle ear disease have also provoked several communications. The author restricts himself to literature appearing in the English language.

# Contract Practice

## V.

### The British Medical Association Continued.

#### Present Constitution.

In 1913 the Council recommended to the Representative Meeting that "the Association do not proceed at present with the proposed formation of a new company." The powers of the Association are, therefore, limited at present by the 1874 Memorandum of Association.

As stated above, the government of the Association is entrusted to the Representative Body. Any Division having not less than 50 members may form a constituency, and any Division having less than 50 members, save in special cases, is grouped by the Council with another Division or other Divisions to form a constituency of at least 50 members. The number of constituencies within the Association cannot exceed 300. The business of the Annual Meeting of the Representative Body is conducted under Standing Orders, modelled after the Standing Orders of the House of Commons. The Representative Body discusses the report of the Council and passes resolutions, adopting the same. Each member is supposed to act on the instruction of his constituency, and all the motions or amendments are moved as from the constituency, and not from the individual. In many cases members have exhibited considerable difficulty in speaking in accordance with the declared policy of their constituencies, but votes registered in the Representative Meeting are interpreted as being the opinions and desires of the majority of the members of the constituency. When a Division has passed a resolution on a certain subject, the representative may not record his vote in opposition to the resolution of the Division within three months. In addition to the Annual Report of Council, resolutions proposed by Division are discussed. When a resolution or amendment is proposed by a Division, and is printed on the agenda paper, no seconder is required to support the motion. On the other hand, all amendments proposed during the meeting by individual representatives must be seconded. Resolutions of the Representative Meeting are deemed to be the decision of the Association, and are binding on the members and the Divisions. When the subject of a resolution affects the funds of the Association or relates to the By-Laws or to the policy of the Association in matters affecting the honour and interest of the medical profession, a two-thirds majority is required. Each representative has one vote, but when 20 members desire it a card vote may be taken, in which case each representative records one vote for each member of his constituency.

The Council was formerly a very large and somewhat cumbersome body. During the early years of the new constitution some difficulty was experienced on account of an endeavour on the part of members of both the Representative Meetings and the Council to exercise the powers of government. These difficulties were to a great extent removed by the amendment of the Articles and By-laws.

The Council is the executive of the Representative Meeting and of the General Meeting, and its duties consist in carrying out the policy determined on by these two bodies. The Council further undertakes the conduct of the business of the Association in accordance with the regulations and by-laws. As will be explained below, a great deal of the work of the Office is conducted by Committees, which report directly to the Council. The Council consists of the ex-officio members (President, Vice-President, President-elect, Chairman of the Representative Body, Chairman of Council, Past Chairman of Council for one year, and Treasurer) and 50 ordinary members. The branches and divisions of the Association within the United Kingdom are grouped in 24 areas, each of which has the right of electing a member. The Branches outside the United Kingdom are also grouped in such a manner that they are represented by seven members. South Australia, Tasmania, Victoria, and Western Australia have one representative, and New South Wales and Queensland a second. In addition the elected representatives of the members and Divisions grouped for the purpose into 12 groups elect 12 members of the Council, the Representative Meeting elects four representatives, and lastly the Royal Army, the Royal Navy, and the Indian Medical Services are represented by one member each.

The Branches of the Association may be regarded either as convenient groups of Divisions or as single Divisions. For the purpose of economical working the expenses incurred in Association matters by the Division are defrayed by the latter out of grants made by the Council to the Branches. These grants amount to 4s. per annum per member of the Branch. In the majority of cases the Branches pay accounts in respect to work done and moneys spent by the Divisions, provided that the total sum does not exceed 2s. per member. Special grants are allowed under special circumstances. Apart from the collection and distribution of money, a certain amount of medico-political and scientific work is undertaken by the Branches, and in accordance with the ethical procedure of the Association certain complaints may be heard by the Ethical Committee of the Branch instead of by the Division. The management of affairs of each Branch is vested in a Branch Council; the composition of the Councils varies to a slight extent in different districts. In the United Kingdom the majority of the Branches appoint medico-political, ethical and organization committees to carry out such work as is not undertaken either by the Divisions or the Council. In cases in which the Division constitutes a Branch, the machinery of the Branch Council and the Divisional Executive Committee is united. The Divisional Executive Committee consists of elected members and office-bearers. The Chairman of the Division and the Honorary Secretary are, to a large extent, responsible for the routine work, which is often very onerous. The Committee deals with those matters affecting the local profession, provided that nothing is undertaken which would be considered outside the powers of the Association. As a rule the Divisions select an energetic member as representative in the Representative Body, and retain his services for several years.

From the foregoing it will be seen that the machinery of the Association admits of an almost ideal democracy. The individual members choose their own executive for the local administration of affairs, and for a proper organization of the members of the Division. Through their representatives on the Branch Council the members are able to safeguard the interests of the profession throughout a wider area than that represented by the Association units. Indirectly the individual members are able to take part in the broader organization undertaken by the Council, while through the representative on the Representative Body each member is given an opportunity of determining the policy of the Association. In the case of the overseas Branches this direct taking part in the moulding of the fortunes of the profession is limited inasmuch as it is impossible for the units to keep in touch with the Representative Meeting and the Council. On this account the Branches outside the United Kingdom enjoy greater freedom in the administration of local affairs. The By-law regulating the powers of such Branches is as follows:—

17.—(1) A Branch not in the United Kingdom shall be competent from time to time to adopt by the vote of a General Meeting of the Branch, and without the approval of the Council, and use, at the expense of its own members, and for their benefit, or for the benefit of the local profession, any means authorised by the Memorandum of Association for the attainment of any of the objects of the Association, notwithstanding that such means shall not have been adopted, or shall not for the time being be used by the Association generally, but without power to impose any liability upon, or to pledge the credit of the Association in connection with any act, matter, or thing done in pursuance of, or arising out of such adoption or user. Any such adoption shall forthwith be notified to the Council by the Branch.

(2) A Branch not in the United Kingdom shall be competent from time to time to adopt by the vote of a General Meeting of the Branch, and without the approval of the

Council, rules dealing with all or any of the following matters, which rules shall be binding upon the members of the Branch:—

(i) The number and area of the Divisions of the Branch.

(ii) The number, duties, and designation of office-bearers of the Branch, provided that the Branch shall at all times have an Honorary Secretary, who shall be the official medium of communication with the Association and with other Branches and Divisions.

(iii) The holding of meetings of the Branch and the business to be considered thereat, but so as not to conflict with the regulations as to the autonomy of Divisions.

(iv) The voting by proxy at any such meeting and at any meeting of the Council of the Branch.

(v) The eligibility of practitioners not registered in the United Kingdom for election by the Branch as members of the Association.

(vi) The privileges of ordinary membership of the Branch, other than the right to attend meetings convened for the consideration of Association business.

(vii) Any other matters as to which the Council may, from time to time, authorise the Branches not in the United Kingdom to make rules without the approval of the Council.

## British Medical Association News.

### MEDICO-POLITICAL.

The following persons have been nominated for membership of the New South Wales Branch:—

Dr. Edward Joseph Stuckey, Peking, China.
Dr. J. V. Duhig, Bundarra, New South Wales.

### THE BRITISH MEDICAL ASSOCIATION (AUSTRALIA) MILITARY MOTOR AMBULANCE FUND.

The appeal of the Federal Committee to which we directed the attention of the members of the Association last week has already resulted in the reception of a considerable amount of money. The Honorary Secretary, Dr. G. H. Abbott, reports that, up to November 10, 1914—that is, about a week after the appeal circulars were posted—the sum of £279/7/4 has been received.

The following is a list of the contributors:—

| | | £ | s. | d. |
|---|---|---|---|---|
| Dr. | Woolf, S., Sydney | 1 | 0 | 0 |
| ,, | Watkins, S., Hornsby | 1 | 1 | 0 |
| ,, | Faithfull, R. L., Sydney | 5 | 0 | 0 |
| ,, | Raffan, G., Sydney | 1 | 0 | 0 |
| ,, | Bennet, F. A., Sydney | 1 | 1 | 0 |
| ,, | D'Arcy, Constance, Sydney | 1 | 1 | 0 |
| ,, | Bassett, W. P., Bathurst | 1 | 1 | 0 |
| ,, | Paton, J. T., Blackheath | 1 | 1 | 6 |
| ,, | Clay, W. R., Narrabeen | 1 | 1 | 0 |
| ,, | Dick, J. A., Randwick | 2 | 2 | 0 |
| ,, | Brandon, A. J. S., Sydney | 1 | 1 | 0 |
| ,, | Blackwood, F. M., Turramurra | 2 | 2 | 0 |
| ,, | Tratman, F., Sydney | 1 | 1 | 0 |
| ,, | Pockley, E., Summer Hill | 2 | 2 | 0 |
| ,, | Worrall, R., Sydney | 1 | 1 | 0 |
| ,, | West, F., Camden | 1 | 1 | 0 |
| ,, | Ewing, T., Nowra | 5 | 0 | 0 |
| ,, | O'Neill, W. H., Turramurra | 2 | 2 | 0 |
| ,, | Wilson, Prof., University, Sydney | 5 | 5 | 0 |
| ,, | O'Reilly, Susie, Pymble | 1 | 1 | 0 |
| ,, | Maher, Odillo, Sydney | 3 | 3 | 0 |
| ,, | Aspinall, Jessie, Sydney | 1 | 1 | 0 |
| ,, | McCredie, R. W., Campsie | 5 | 5 | 0 |
| ,, | Campbell, T. G., Haberfield | 0 | 10 | 6 |
| ,, | Kerr, A. L., Sydney | 2 | 2 | 0 |
| ,, | Cribb, A. J., Millthorpe | 0 | 10 | 6 |
| ,, | Lidwill, M., Strathfield | 1 | 0 | 0 |
| ,, | Hawthorn, A., Carcoar | 0 | 10 | 6 |
| ,, | Bray, P. D., Blayney | 3 | 3 | 6 |
| ,, | Button, H. G., Junee | 1 | 1 | 6 |
| ,, | Lethbridge, H. O., Narandera | 2 | 2 | 0 |
| ,, | McLeod, James, Rockdale | 1 | 1 | 0 |
| Dr. | Dowling, Norman, Young | 1 | 1 | 0 |
| ,, | Craig, F. B., Newtown | 1 | 1 | 0 |
| ,, | Davis, N. J., Bullahdellah | 1 | 1 | 0 |
| ,, | Pym, C. B., Parramatta | 2 | 0 | 0 |
| ,, | Lee, H. E., Burwood | 1 | 1 | 0 |
| ,, | Marshall, H. H., Sydney | 2 | 2 | 0 |
| ,, | Cohen, A. A., Sydney | 1 | 1 | 0 |
| ,, | Barrington, F., Sydney | 2 | 2 | 0 |
| ,, | Griffiths, F. Guy, Sydney | 5 | 0 | 0 |
| ,, | Pockley, F. A., Sydney | 2 | 2 | 0 |
| ,, | Luker, Donald, Sydney | 1 | 1 | 0 |
| ,, | Hood, Jarvie, Sydney | 21 | 0 | 0 |
| ,, | Lawrence, Herman, Melbourne | 2 | 2 | 0 |
| ,, | Maher, C. H., Sydney | 1 | 1 | 0 |
| ,, | Finckh A. E., Sydney | 0 | 10 | 6 |
| ,, | Hetherington, H. B., Burwood | 1 | 1 | 0 |
| ,, | Wood, P. M., Ashfield | 2 | 2 | 0 |
| ,, | English, J., Yass | 0 | 10 | 6 |
| ,, | Robertson, F. G., Collarenebri | 1 | 1 | 0 |
| ,, | Maffey, R. W., Singleton | 1 | 1 | 0 |
| ,, | Machattie, T., Bathurst | 1 | 1 | 0 |
| ,, | Welch, K. St. V., Narandera | 1 | 1 | 0 |
| ,, | Duncan, R. B., Victoria | 1 | 1 | 0 |
| ,, | MacPherson, J., Sydney | 1 | 1 | 0 |
| ,, | Gibson, A. J., Sydney | 1 | 1 | 0 |
| ,, | Palmer, H. W., Waterfall | 1 | 0 | 0 |
| ,, | Bell, Geo., Sydney | 5 | 0 | 0 |
| ,, | Eddie, R., Bombala | 1 | 1 | 0 |
| ,, | Quilter, J., Moruya | 3 | 3 | 6 |
| ,, | Cooper, Lilian, Brisbane | 1 | 1 | 0 |
| ,, | Cahill, A. J., Lismore | 1 | 1 | 0 |
| ,, | Henzell, A. P., Brisbane | 2 | 0 | 0 |
| ,, | Hurrey, H. G., Rosewood, Q. | 1 | 1 | 0 |
| ,, | Hornabrook, R. W., Malvern, Vic. | 2 | 2 | 0 |
| ,, | Price, Thos. A., Toowoomba, Q. | 1 | 1 | 0 |
| ,, | D'Ombrain, A. E., Sydney | 1 | 1 | 0 |
| ,, | Fox, H. E., Kiama | 1 | 1 | 0 |
| ,, | McDowall, V., Laidley, Q. | 1 | 1 | 0 |
| ,, | Russell, E., Stanthorpe, Q. | 1 | 1 | 0 |
| ,, | Newland, H. S., Adelaide | 1 | 1 | 0 |
| ,, | Rennie, G. E., Sydney | 2 | 2 | 0 |
| ,, | Whiteman, R. J., Strathfield | 2 | 2 | 0 |
| ,, | Sinclair, E. P., Newtown | 1 | 1 | 0 |
| ,, | Clubbe, C. P., Sydney | 1 | 1 | 0 |
| ,, | Anonymous | 2 | 2 | 6 |
| ,, | Hipsley, Percy, Waverley | 1 | 1 | 0 |
| ,, | Stuckey, F. S., Inverell | 1 | 1 | 0 |
| ,, | Corlette, C. E., Sydney | 1 | 1 | 0 |
| ,, | Stanley, G. P., Tamworth | 2 | 2 | 0 |
| ,, | Opie, A. J., Coraki | 0 | 10 | 0 |
| ,, | Evans, T. G. C., Kyogle | 1 | 1 | 0 |
| ,, | Alcorn, S. A., East Maitland | 1 | 1 | 6 |
| ,, | Failes, T. G., Coonabarabran | 1 | 1 | 0 |
| ,, | Scott, C. H., Scone | 0 | 10 | 0 |
| ,, | Marsh, H. T., Bombala | 2 | 2 | 0 |
| ,, | Beith, R., Kiama | 5 | 5 | 6 |
| ,, | Verco, S. M., South Australia | 1 | 1 | 6 |
| ,, | Goode, A., Terowi, S.A. | 1 | 1 | 3 |
| ,, | Levis, Eric H., South Autsralia | 1 | 1 | 0 |
| ,, | Harbison, W. H., Wallaroo, S.A. | 1 | 1 | 0 |
| ,, | James, Thos., Moonta, S.A. | 1 | 1 | 0 |
| ,, | Robertson, W., Adelaide | 1 | 1 | 6 |
| ,, | Lucas, R. R., Laura, S.A. | 1 | 0 | 0 |
| ,, | Griffiths, E. W., Mile End, S.A. | 1 | 1 | 0 |
| ,, | Stokes, A. F., Glenelg, S.A. | 1 | 0 | 6 |
| ,, | Yeatman, J. W., Auburn, S.A. | 1 | 1 | 3 |
| ,, | Muirhead, L. G., Woodville, S.A. | 0 | 11 | 6 |
| ,, | Martin, R. H., Adelaide | 3 | 3 | 0 |
| ,, | Gilbert, H. Y., Adelaide | 2 | 3 | 0 |
| ,, | Verco, J. C., Adelaide | 10 | 11 | 0 |
| ,, | Hamilton, T. H., Adelaide | 1 | 1 | 6 |
| ,, | Wood, A. Jeffreys, Melbourne | 2 | 3 | 0 |
| ,, | Dane, P. G., Ballarat | 2 | 1 | 0 |
| ,, | Anderson, A. V., Melbourne | 1 | 1 | 0 |
| ,, | Fetherston, R. H., Melbourne | 10 | 10 | 0 |
| ,, | Sutton, Harvey, Melbourne | 1 | 1 | 0 |
| ,, | Liddle, Percy, Daylesford, Vic. | 0 | 10 | 0 |
| ,, | Webster, P. S., Melbourne | 5 | 1 | 0 |
| ,, | Blakie, J. G., Melbourne | 0 | 7 | 6 |
| ,, | Patton, J. S., Lismore, Vic. | 1 | 1 | 0 |
| ,, | Wood, W. A., South Yarra | 1 | 1 | 0 |

| | £ | s. | d. |
|---|---|---|---|
| Dr. Irving, H., Glen Thompson, Vic. .. .. .. .. | 2 | 2 | 0 |
| „ Bull, R. J., University, Victoria .. .. .. .. | 1 | 2 | 0 |
| „ Maclure, F., Melbourne .. .. .. .. .. .. | 2 | 2 | 6 |
| „ Harding, R. V., Rockhampton, Q. .. .. .. | 2 | 2 | 0 |
| „ Parker, R. A., Henlesville, Q... .. .. .. .. | 1 | 1 | 0 |
| „ Crawford, J. H., Miles, Q. .. .. .. .. .. | 1 | 1 | 6 |
| „ Sirois, E., Marburg, Q. .. .. .. .. .. .. | 2 | 2 | 0 |
| „ Spark, E. J. S., Queensland .. .. .. .. .. | 1 | 1 | 0 |
| „ Bourne, Eleanor, Brisbane .. .. .. .. .. | 1 | 1 | 6 |
| „ Elworthy, W., Esk, Q. .. .. .. .. .. .. | 1 | 0 | 0 |
| „ Garde, H., Maryborough .. .. .. .. .. .. | 1 | 1 | 0 |
| „ Brockway, A. B., Brisbane .. .. .. .. .. | 5 | 5 | 0 |
| „ Culpin, E., South Brisbane .. .. .. .. .. | 1 | 1 | 0 |
| „ Beaman, E. H., Bundaberg, Q. .. .. .. .. | 2 | 2 | 0 |
| „ Farmer, E., Toowoomba, Q. .. .. .. .. .. | 2 | 3 | 0 |
| „ Brooks, G., Petersham .. .. .. .. .. .. | 2 | 2 | 0 |
| „ Lightoller, G. H., Edgecliff .. .. .. .. .. | 10 | 0 | 0 |
| „ Blackburn, C. B., Sydney .. .. .. .. .. | 25 | 0 | 0 |

## Hospitals.

### THE NEW COAST HOSPITAL, SYDNEY.

The Premier of New South Wales performed the ceremony of laying the foundation-stone of the new hospital at Little Bay, near Sydney, on Saturday, November 7, 1914. A large number of political and other persons, including several members of the medical profession, witnessed the ceremony and listened with interest to the speeches delivered by the Minister for Health and the Premier. Mr. Flowers pointed out that the hospital which would be built around the stone now being laid was to form a part of the scheme with which he and the Premier were associated. The chain of hospitals proposed would offer to the sick every means of treatment which the foresight of a health policy and science of to-day could offer. The old Coast Hospital had done good service, but was now out of date and no longer sufficient for the needs of the district. To bring it up to date would cost too much, and he therefore held it to be economical to institute a new one. The pavilion which was being commenced would cost about £15,000, and would be one of twenty. It would not have any specially attractive architectural features, but its equipment and structure would be modern and efficient, and its surroundings would be ideal. The hospital would be a medical hospital, and would receive medical cases from the three great city hospitals in order to free these institutions to undertake an increasing amount of surgical and emergency work. He spoke of his relations with the Premier, who was in complete sympathy with the health policy he had instituted. Whenever he brought Mr. Holman a proposal which would cost money, he had received encouragement and assistance. The new hospital, when completed, would be the largest in the Southern hemisphere.

Mr. Holman, after laying the stone in the usual fashion, and after having received a souvenir of the occasion in the shape of a miniature gold trowel with a handle of Australian beryl, made a very suggestive speech, especially directed toward those who had criticized him as a Treasurer. He drew a comparison between the churlish, narrow ideas of a Treasurer who refused to spend money, and who, when faced with a demand for funds to provide hospitals, to equip convalescent homes, to institute the proper inspection of school children and to improve the health of the population, replied with a "You cannot have it," and the conception he had of a Treasurer's duties. He was not afraid of spending money, but the task of discriminating between those undertakings which would benefit the public and expenditure which would turn out to be non-productive was difficult. He held that the strength of nations was not to be measured by the number of their chariots and horses, nor by the size of their navies or armies, but by their enlightenment and the health of mind and body of the people. He concluded by making suitable reference to Mr. Flowers and the policy which he had evolved. Mr. Flowers would analyse with the utmost care a hundred schemes, and after he had selected a half of a dozen sound ideas, would bring them to his colleagues. He was convinced of the wisdom of supporting these proposals by grants from the Treasury.

Mrs. Holman and Mrs. Flowers were presented with beautiful sprays of flowers by the little son of Dr. Millard, the Medical Superintendent of the Coast Hospital, and Miss Daphne Harpur, the little daughter of Mr. Flowers's confidential secretary.

### ADELAIDE HOSPITAL.

The necessity of reforming the Adelaide Hospital has been urged in the public press and elsewhere for some considerable time. As the result of certain questions which were asked in Parliament in this connexion, the Government called upon the Hospital Board to submit a report. This report was laid on the table of the Legislative Council on November 3, 1914. The Chairman of the Board, in his report, admits that the hospital is very much behind the times, and suggests that advantage should be taken of the generosity of the late Mr. Thomas Martin in expending the money in bringing the hospital up-to-date. The money was left "direct to the Adelaide Hospital," and he was therefore at a loss to understand the motives impelling the Charity Commissioners in advising the Government to accumulate the principle, interest and rents for a period of 15 years. This action would have the effect of checking generous gifts to the hospital. It appears that the Charity Commissioners hold in trust for the hospital £56,000 worth of house property in the city, and £26,000 invested in Government securities. This capital yields an income of £3,600 per annum. The Chairman expresses himself as being opposed to the sale of either property or security, and suggests that the Government should advance the money required for the alterations and additions on the security held in trust. The more urgent alterations and additions include the provisions of lifts, suitable systems of lighting, and of heating, proper sanitary arrangements, additional operating theatres, verandahs, dining-rooms for convalescents, additional accommodation for the examination of patients, and a new out-patient department.

The Superintendent of Public Buildings in an appended report states that there is no necessity at present for the rebuilding of the old portion of the hospital. The present wards could be made to answer their purpose admirably for some years to come with certain improvements.

### ST. VINCENT'S HOSPITAL, MELBOURNE.

The new out-patients' department of the St. Vincent's Hospital, Melbourne, was opened by the Governor-General on November 4, 1914. The ceremony was an impressive one, and was marked by some very excellent speeches. Among those present were Sir Gerald Strickland (Governor of New South Wales), Lady Galway, the Lord Mayor and Lady Mayoress, Lady Allen, the Chief Secretary (Mr. Murray), Sir Harry Allen, Dr. Latham, other members of the hospital staff, and Archbishop Carr. The Governor-General paid a warm tribute to those who directed the destinies of the institution, and to Catholic nursing in general. Dr. Latham, as chairman of the staff, presented a congratulatory address on behalf of his colleagues to the Mother-General of the Sisters of Charity (Mary Francis M'Guigan) on the occasion of her golden jubilee. Archbishop Carr responded on behalf of the Mother-General, and the Lord Mayor moved the adoption of the report and balance sheet. From the report, it appears that in the year ending June 30, 1914, 22,413 persons had received treatment at the institution; 2,721 persons had been admitted into the wards. The income from all sources amounted to £13,754, including a special grant from the Government of £2000. The expenditure amounted to £15,131, thus giving a balance of expenditure over income of £1387.

The new department consists of a central hall, various reception and other rooms for the out-patients, and on the upper stories accommodation for 64 nurses. The structure is of brick, and is fireproof, and the architecture has been

carried out in the free renaissance of the Georgian period. The equipment and decorations are modern, artistic and in keeping with those of the older portion of the institution.

### CHILDREN'S HOSPITAL, NORTH ADELAIDE.

The annual report of the Board of Management of the Children's Hospital, North Adelaide, for the year 1913-14 was presented to a well-attended meeting on October 26, 1914. During the year 983 children have been admitted into the wards; 1066 children were under treatment in the wards; 1397 attended the out-patient department, and 7654 attended the dispensary. Of the in-patients, 619 were discharged as cured, 195 as relieved, and 46 as unrelived; 130 little ones died during the year. There were 228 cases of diphtheria, with 25 deaths; 193 of the cases were complicated, and 35 showed one or more complications, or sequelæ. There were 89 cases of pneumonia, 17 of bronchitis, 17 of enteric fever, 73 of gastro enteritis, 20 of tubercular diseases of joints, and 20 of anterior polio-myelitis. A large number of surgical operations were performed during the year. The committee had considered an extension of the work in connexion with the treatment of infants; and, in spite of the financial depression, the Government had increased the annual grant by £500. In addition to this, a special grant had been placed on the estimates to provide extra accommodation for an increased nursing staff.

Dr. R. Brumitt and Dr. G. Hayward had resigned their positions on the staff, and a third vacancy had been created by the death of Dr. Wigg. Dr. A. C. Magarey had been appointed surgeon to the out-patients, Dr. Bursden anæsthetist, Dr. John Verco registrar, and Drs. Florey, Lucas, Wilkinson and W. Hamilton had been appointed to other posts on the staff.

In moving the adoption of the report, His Excellency the Governor paid a high tribute to the excellent work which had been conducted by the medical and nursing staffs.

### THE GENERAL HOSPITAL, BRISBANE.

At a meeting of the committee of the Brisbane General Hospital, held on November 4, 1914, a letter was read from the Home Department, advising the Board that no provision had been made on the estimates for the current financial year for the erection of a ward at the hospital for the treatment of acute mental diseases. We trust that this fact will only mean a postponement of the institution of an up-to-date psychiatric clinic. The value of these clinics, both from a therapeutic and from a teaching point of view, cannot be overrated. The meeting determined to invite the architects to prepare plans and specifications for a refractory ward.

## University Intelligence.

### UNIVERSITY OF SYDNEY.

At a meeting of the Senate of the University of Sydney, held on November 2, 1914, it was resolved that a meeting for the conferring of degrees should be held on December 23, 1914. The following examiners were appointed to act with the professors in the conduct of the examinatons:—Modern history, Dr. P. R. Cole; medicine, Dr. Cecil Purser; surgery, Dr. Gordon Craig; obstetrics, Dr. S. H. MacCulloch; gynæcology, Dr. George Armstrong; clinical medicine, Dr. Sinclair Gillies and Dr. Macdonald Gill; clinical surgery, Dr. C. MacLaurin and Dr. H. L. Maitland. Faculty of Law, LL.B. intermediate examination: the professor of Law, the lecturer in Roman Law, and Messrs. N. de H. Rowland and C. A. Weston. LL.B. final examination: the professor and lecturers in Law; Mr. C. G. W. Davidson. LL.D. examination: the professors and lecturers in Law, and Professor Pitt Cobbett.

It was further resolved:—

1. "That arrangements be made to obviate the necessity for schools to prepare candidates for two separate examinations, as at present, viz., the senior and leaving certificate examinations, in order that candidates may obtain leaving certificates and compete for University scholarships."

2. "The board cannot, however, advise the Senate to award the University scholarships on the leaving certificate examination."

A committee was appointed for the purpose of submitting a scheme for a memorial of the late Sir Normand MacLaurin; the Chancellor, the Vice-Chancellor, Mr. Teece, Mr. Board, Judge Backhouse, Sir Phillip Jones, Sir Thomas Anderson Stuart, and Professor David were elected members of the committee.

### MELBOURNE UNIVERSITY.

Applications for the Rhodes Scholarship at the Melbourne University must be sent in on or before November 30, 1914. The Selection Committee will consist of Sir Arthur Stanley, Sir John Madden, Mr. F. Tait, Professor Masson and one other member of the teaching staff.

### ADELAIDE UNIVERSITY.

At a meeting of the Council of the Adelaide University, held on October 30, 1914, it was determined that Dr. Barlow, the Rev. Dr. Jefferis, Dr. Poulton, Professor Ennis and Professor Mitchell should retire from the Council in accordance with the Act of Incorporation. The offer received from Mr. C. J. Reade to deliver a lecture on November 16, 1914, on "Cities, Past, Present and Future," was accepted.

## Reviews.

### TREATMENT OF HEART DISEASE.

Professor T. Schott, whose name, with that of his brother, has for a long time been associated with a form of treatment of diseases of the heart by baths and gymnastics, has just published a new book* on this subject, which has been translated into English, and to which a Foreword has been added by Professor Anders, of Philadelphia.

We have read this book carefully and with considerable interest, with a view to ascertain the scientific foundation of this method of treatment, and have been specially interested in the clinical results reported by the author. We may say at once that we are not convinced of the truth of his arguments, for in our judgement he fails to prove his thesis, and in some places he appears to contradict himself directly. We are not disposed to doubt that good results have been obtained in some cases of chronic disease of the heart by baths and graduated exercises, but we are not convinced that the clinical cases which the author describes bear out the interpretation which he places upon them. For instance, in speaking of the contra-indications to this line of treatment he mentions "widely extensive degenerative conditions of the heart muscles." Under such a heading we should include cases of myocarditis, for we take it, that myocarditis is not a stationary but a progressive condition. Yet one of the cases he uses as an illustration of the benefits of this treatment, he says, was one of mitral insufficiency, "with a **considerable degree of myocarditis.**" Again, in speaking of angina pectoris, he describes true angina pectoris as "being occasioned by sclerotic changes in the course of the coronary vessels, or in the aorta, especially at the place of origin of the coronary arteries. He then describes a case, which he says was one of true angina pectoris, which was cured by his treatment, and remained quite well and free from all symptoms and signs of heart affection for many years. Surely true angina pectoris is one of the most serious of heart affections, and on Schott's explanation of the pathology of the true form of this disease it is inconceivable that a case could be cured; for sclerotic change in the coronary vessels is not a condition which disappears, but one which, on the contrary, tends to progress. The case of mitral stenosis in a single lady over 30 years of age is, to our thinking, one of cardiac neurosis associated with an organic lesion, and was cured, not directly by the baths, but by suggestion enforced by the special treatment adopted.

Professor Schott's powers of clinical diagnosis are truly remarkable. On page 105 he says: "Clinical observation in many cases shows also an increased growth of the mus-

* The Balneo-Gymnastic Treatment of Chronic Diseases of the Heart, by Professor Theodor Schott, M.D., Bad-Nauheim. With a Foreword by James M. Anders, M.D., LL.D., Professor of Medicine, Medico-Chirurgical College, Philadelphia. 1914: Philadelphia. P. Blakiston's Son and Co. Melbourne: Stirling and Co. pp. 191, with 87 illustrations.

cular tissue, so that a commencing myocarditis either completely disappears or may be checked in its advance for many years." Again, on page 106, in speaking of the benefits of this treatment in cases of fatty heart, he says: "The amount of fat may be diminished without any concomitant disappearance of muscle substance; in fact I could cite cases in which, along with the loss of fat an increase in the muscle tissue actually occurred, and all discomforts vanished." We are not told how clinical observation can prove the presence of microscopical changes in the heart tissues.

Again, in speaking of X-ray examination of the heart, he admits that for purposes of comparison this method is unsatisfactory in consequence of the varying interpretations placed on the pictures by different observers. Yet he publishes two skiagraphs of the heart from a case of angina pectoris, one during the attack, and the other after half an hour's treatment by gentle resistance exercises. As no explanation is attached to either of these pictures, we must admit that it is practically impossible to recognize any difference whatever between them. The book is full of dogmatic assertions, clear proofs of which are not forthcoming, with a natural bias against any form of treatment other than that by the baths and the gymnastic exercises practised by Professor Schott at Bad-Nauheim.

## Public Health.

### INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ended October 31, 1914:—

| Notifiable Disease. | Cases. |
|---|---|
| Enteric Fever | 17 |
| Diphtheria | 56 |
| Varicella | 33 |
| Phthisis | 6 |
| Erysipelas | 5 |
| Scarlet Fever | 1 |
| Ankylostomiasis | 1 |
| Puerperal Fever | 2 |
| Infantile Paralysis | 10 |
| Total | 131 |

### HEALTH OF VICTORIA.

During the fortnight ended October 27, 1914, the following returns have been received from the Department of Public Health, Victoria:—

| | Enteric Fever. | Diphtheria. | Scarlet Fever. | Pulmonary Tuberculosis. |
|---|---|---|---|---|
| Whole State— | | | | |
| Cases | 5 | 152 | 12 | 67 |
| Deaths | 1 | 7 | — | 15 |
| Metropolis— | | | | |
| Cases | 1 | 69 | 11 | 49 |
| Deaths | 1 | 5 | — | 12 |

The number of diphtheria cases notified from the various municipalities for the fortnight ended October 27, 1914, were as follows:—

| Municipality. | Diphtheria. |
|---|---|
| Bendigo | 9 |
| South Melbourne | 9 |
| Prahran | 8 |

Diphtheria is moderately prevalent throughout the State; no one centre showing a large number of cases.

### SMALL-POX IN SYDNEY.

The number of small-pox cases reported to the Department of Public Health, New South Wales, during the week ended November 8, 1914, were:—

| | |
|---|---|
| City of Sydney and Metropolitan District | 16 |
| Country District—Yass | 1 |
| Total | 17 |

### SCHOOL HYGIENE IN TASMANIA.

The annual report of the Education Department of Tasmania for the year 1913 has been issued, and contains a great deal of valuable and interesting information. It is impossible to deal with the general contents of this report in the "Medical Journal of Australia." From the reports of the Medical Officers the following data have been selected:—

In the country districts, Dr. Isabel Ormiston reports on the conditions of the children in 80 schools—3100 children were examined. The examination included the testing of the sight of each eye and of the hearing of each ear, the inspection of the fauces and naso-pharynx, and of the skin and hair. She records a marked improvement in the general cleanliness of the children. Pediculosis was stated to be disappearing. Defects in the lighting and ventilation of schools were being remedied. In spite of a number of epidemics of communicable disease, it had only been necessary to close a few of the schools.

One hundred and fifteen children had defective sight (6/12 and less), 4 were blind in one eye, and there were 12 instances of stabismus. Conjunctivitis and marginal blepharitis were common. Ten children were found to be suffering from otorrhœa, and 50 were markedly deaf. In 120 cases the presence of adenoid vegetations called for treatment. In 18 cases an organic lesion of the heart was discovered. Fifty children were suffering from anæmia, and in 30 there were signs of malnutrition. Twenty-five children had enlarged cervical glands, but no case of pulmonary tuberculosis was discovered. In 17 a well-marked scoliosis was present. In regard to skin diseases, scabies was found in 28 children, and pediculosis in 45.

Turning to the mental condition of the feeble-minded children, out of 32,817 children on the roll of the State schools, 1202 were backward from accidental causes, 529 were mentally dull, 107 were feeble-minded, 9 were imbecile, and 47 epileptic, deaf, blind, or paralytic. Of 6246 children in the private schools, 6 were backward, 5 were mentally dull, 8 were feeble-minded, and 1 was epileptic.

Dr. A. H. Clarke deals with the Hobart schools: 1867 children were examined; 263 were suffering from adenoid vegetations and hypertrophy of the tonsils, 152 from affections of the eye, 12 from scoliosis, 11 from otitis media, 8 from goitre, and 4 from heart disease. A small outbreak of morbilli had taken place in the schools during the year, and a few cases of diphtheria had also occurred. The staff of the General Hospital undertook the treatment of 63 children whose parents were unable to pay a doctor.

Dr. G. H. Hogg reports generally on the health conditions of the school children in Launceston. He gives a favourable report, and deals specifically with the condition of the teeth. Of 642 children examined 233 had bad teeth, 219 had what he describes as medium teeth, and 190 good teeth. He repeats his oft-expressed demand for a properly equipped dental clinic.

## Medical News.

### EXPORTATION OF DRUGS FROM ENGLAND.

We have been informed by the Department of External Affairs of the Commonwealth that the drugs, etc., the exportation of which was prohibited by the Imperial Government on August 10, 1914, were as follows: Aspirin, antipyrin, chloral, veronal, urotropine, novocaine, paraldehyde, phenacetin, protargol, salicylates, salvarsan, neosalvarsan, sulphonal, trional.

On September 8, 1914, castor oil, boric acid, digitalis and its preparations, and all fine chemicals, were removed from the list, and the following additions made: Acetanilide; acetylsalicylic acid (aspirin) and salicin; aconite and its preparations and alkaloids; adrenin, adrenalin, and its preparations; ammonium sulphocyanide; antipyrine (phenazone); balsam of Peru; benzoic acid (synthetic) and benzoates; cantharides and its preparations; chloral and its preparations, including chloramid; chrysarobin; citrate of magnesia; citric acid, alkaline citrates and calcium citrate; coal tar products for use in dye manufacture; diethylbarbituric acid (veronal) and veronal sodium; dulcite; dyes and dye-stuffs obtained from coal tar; emetin hydrochlor; eucaine hydrochlor; ergot of rye and its preparations and

alkaloids; gentian and its prepartions; glacial acetic acid; hexamethylene tetramin (urotropin) and its preparations; hydrobromic acid; hydrokinone; mannite; neosalvarsan; nitro-toluol; novocain; oil of turpentine; paraldehyde; paraffin, liquid, medicinal; pastilles, jujubes, lozenges and cachous generally containing prohibited ingredients; "peptone Witte"; phenacetin; pilocarpine alts; potassium and its salts and preparations (including bichromate and prussiate of potash); pyrogallic acid; saccharin (including "saxin"); santonin and its preparations; sulphonal; sulphate of zinc; tartaric acid and alkaline tartrates; thymol and its preparations; trional.

The Metropolitan Municipalities of Melbourne have been considering the best means of dealing with diphtheria in schools. A committee was appointed some little time back to consult with certain medical authorities and to report. This committee has drawn up certain recommendations, which were considered by the Conference of Representatives of the various Municipalities on October 21, 1914, and approved of. It is suggested that all the Metropolitan Municipalities should agree on a uniform plan of action. The Medical Officers of Health and the Sanitary Inspectors should be instructed to investigate every case of diphtheria, and to attempt to ascertain the source of infection. It is further proposed that cultures be made from the throats of all children who have been in contact with diphtheria patients, either at home or at school, and at times of all children attending a school at which a case has occurred. The Medical Officer of Health and the Sanitary Inspector should take steps to ensure the isolation of every patient. In regard to the question of "carriers," it is proposed that every child not suffering from the disease, but harbouring the bacilli should be isolated in an efficient manner under the charge of a qualified nurse or other responsible person. Certain preventive measures should be applied to the other members of the household. The last recommendation suggests that the Medical Officer of Health, or the medical practitioner in charge, should furnish a weekly report to the Municipal Council on the condition of the "carrier," and on the observance of efficient isolation. These recommendations will be submitted to the various Councils.

At a meeting of the Necessary Commodities Control Commission, held on October 29, 1914, it was stated that an increase in price of certain drugs, ranging up to 50 per cent., had been introduced by Messrs. Parke, Davis and Co., for the purpose of conserving some of their stocks. This firm is dealing in between 4000 and 5000 distinct lines; whereas the advance in price only affects about 40 of these. The Assistant Manager stated that the remainder would not be put up in price, unless this was absolutely necessary. The Government contracts were being supplied at prices ruling before the war, and the same apply to goods supplied to the Sydney and Royal Prince Alfred Hospitals. He expressed himself very cautiously in regard to the suggestion that only articles manufactured in Germany should be increased in price.

The Sydney Hospital has received a legacy of £250 in accordance with the will of Mrs. Elizabeth Frazer, of Woollahra, Sydney, who died on June 30, 1914. A similar sum was left to each of the following institutions:—The Sydney City Mission, Benevolent Asylum, and Sydney Ragged School. A property known as "Silva Plana," at Springwood, is to be held in trust at the discretion of the trustees for conveyance to the Royal Alexandra Hospital for Children, Camperdown, if the trustees of that institution agree to its use as a convalescent home for the patients.

The Council of the New South Wales branch of the British Medical Association determined some time since that it would be fitting to invite the members to subscribe to the Red Cross Society's funds in lieu of attending the usual annual dinner. This invitation resulted in the collection of £55/15/-. A cheque to the value of this amount has been sent to the New South Wales Division of the Australian Medical Society as a contribution "from a few members of the British Medical Association."

## Obituary.

RICHARD LEWIS DE TEISSIER PREVOST.

It is with great regret that we have to record the death of Dr. Prevost, of North Sydney. Early on the morning of November 5, 1914, Dr. Prevost hastened in his motor-car to a confinement case about four miles distant from his home. As he did not arrive, a message was sent to Mrs. Prevost. His partner, Dr. Clarence Read, immediately set out in search, and found, within a half a mile of his destinuation, Dr. Provost lying dead under his overturned car. The Civil Ambulance was communicated with, and courteously removed the body to Dr. Read's house with marked promptitude. This action has been greatly appreciated. It appears that Dr. Prevost travelled too fast down a steep hill, with the result that he came to grief at a right-angle turn. The funeral was held on Friday, November 6, 1914, and was attended by a large number of mourning relations and friends, including both rich and poor patients. Dr. Prevost had made himself endeared to all his patients, and enjoyed a very widespread popularity. His lodge patients had learned to appreciate his kindly services and his skilled attention, and were never allowed to feel that there was any difference between them and those who consulted him as private patients. He was a keen sportsman, having played football, cricket and tennis at school and college, and was fond of fishing and shooting. It can truly be said that both on the field and in ordinary life he played cricket.

Dr. Richard Prevost was born at St. Kilda in 1878, being thus but 36 years at the time of his death. He was the son of an Indian Army Officer who came to Australia in the seventies, and achieved a considerable reputation in civil engineering. He was educated at a private school in Darling Point, Sydney, and later at Cumlodan College, East St. Kilda. After leaving school he passed his matriculation at the Melbourne University, and commenced the course for his Arts degree. Later he matriculated at Sydney, and completed his preliminary and medical career at the Sydney University. In 1909 he graduated as a Bachelor of Medicine. In 1906 he was elected by his colleagues vice-president, and in 1907 president, of the Undergraduates' Association. While at University he was probably the most popular of the undergraduates.

He was appointed surgeon to the Royal Australian Naval Reserve in 1909, and Resident Medical Officer at the Royal North Shore Hospital in 1911. On completing his term of office, he joined Dr. Clarence Read, and eventually became his partner. In 1914 he was appointed Honorary Anæsthetist at his old hospital. Dr. Prevost was twice married. His first wife was a daughter of Mr. Frank Bennett, of the "Evening News," of Sydney, and his second wife was the daughter of Mr. J. Burnet, of Sydney. He leaves one child of five months.

## Personal.

Dr. J. C. Hemsley, Goodna, Queensland, is acting as locum tenens for Dr. Buchanan, Ann Street, Valley, during his absence on active service.

Dr. William Percy Gowland, F.R.C.S. (Eng.), has been appointed Professor of Anatomy at the Otago University, New Zealand. Dr. Gowland was a Bradley surgical scholar at Owen's College in 1901, and held various appointments in Manchester and London. He is now resigning the posts of Senior Demonstrator and Assistant Lecturer in Anatomy at the Liverpool University. He sailed from England for New Zealand on October 24, 1914.

Dr. Espie Dods, of Brisbane, received the marked appreciation of the Police Force on November 5, 1914. The Commissioner, the officers and non-commissioned officers of the force invited Dr. Dods to a large gathering, at which a high tribute was paid to his services as medical officer. In addition to the complimentary speeches delivered by various members, the Commissioner presented Dr. Dods with a purse of sovereigns subscribed by the members of the Brisbane Police. Dr. Dods, as has already been reported in the "Medical Journal of Australia," will be a member of the Second Expeditionary Force.

## Special Correspondence.

(From our London Correspondent.)

LONDON.

### The Legislative Value of Eugenics.

Major Leonard Darwin, the President of the Eugenics Education Society, lectured on July 9th before the Junior Constitutional Club on "The Influence of Eugenics on Legislation." Considering the question as to how the principles that were applicable to plants and animals should be applied to human affairs, Major Darwin argued that the results should only be applied with the very greatest caution. Man was influenced by stored up knowledge, and animals were said not to be influenced by conscience, though he was not altogether prepared to accept that view. But man had religion, whereas animals had not, and man should never run counter to his religion. What were wanted were the lessons of the stockyard, and not its methods. It was wicked to bring up children in such conditions that they could not grow up into healthy men and women, and it was also a duty to see that they were not brought into the world without their having a chance of growing up as good citizens. There were two possible methods of reform, the moral method of making men recognize their responsibility towards posterity in regard to marriage and the legislative or economic method, or the changes needed to diminish the fertility of the unfit. To make marriage the union of two people for the production of children of a certain type was an absolutely false idea.

It should be noted how few men married out of their social class, and also how considerably the possession of a little money increased the chances of a woman's marriage. More attention ought to be paid to character than to social status. The parents should assist by associating with honourable families, and the children should follow their example. In this way moral progress would go hand in hand with racial progress. As regards legislation, there were many difficulties. The suggestion had been made that a bonus should be given to any mother on the birth of a child. He would not say whether the proposal was good or bad, but looked at eugenically its effect would be only to affect the birth-rate of the very lowest type, and the proposal was dysgenic and not eugenic. The recent feeble-minded legislation was the first that had ever been passed with a definite eugenic idea. As regards the Poor Law, foreign nations attempted to raise those that could be raised, a policy that had the advantage of showing what persons were curable and what incurable. If the differentiation was more complete, the present over-sensibility in dealing with the problem would pass away. In the dealings of the State with criminals, the laws acted eugenically, so far as concerned the major crimes, where the criminal often had good qualities, but there was no eugenic check on the short-sentence criminal, who was usually of an inferior type. Society often drove a man into petty crime, and then did everything it could to make him perpetuate his kind. Segregation should, he argued, be made as pleasant as possible, in contradistinction to imprisonment, of which the object was deterrent. The community should consider the heavy burden placed upon it by the wastrel. They should contemplate a society where the wastrel was replaced by capable men. If a drastic eugenic policy were practicable, the working classes would benefit more than any other class, for, to quote but an instance, the rates of insurance would fall or the benefits available would be increased.

## Correspondence.

### NATIVE HOSPITAL AT RABAUL.

Sir,—It may be of some slight interest to jot down impressions gained at first hand of the native hospital at Rabaul, our newly acquired possession in the Pacific. I was on the beach on a most lovely Sunday morning, and determined to visit this hospital, and see what German efficiency could do for the natives. I had previously visited the botanical and acclimatization gardens, and was very much struck with their efficient management. Everything in that department was excellent. The well laid out plots, the good nomenclature on porcelain tablets. For the first time I really grasped the fact what a boon a common language is to science. My German soon failed me, but there was the old familiar Latin, the natural order, genus and species, and at once I was at home. Rabaul harbour is a flooded crater; Die Mutter, a peak close on 2700 feet, looks down on it. The foreshore is black sand. On it sandpipers trip close to the water's edge, while the township of Rabaul stretches away back to the talus that forms the cliff edges. You notice cinder beds, 20 feet in section. They have used these cinders to top-dress the road to the top of the crater. At the end of this road is Government House, looking down on the old crater and the ships floating on her liquid bosom. The Germans have laid out Rabaul like to a chess-board—avenues and streets. I christened the avenues for myself: Mayo Avenue, Camarina Avenue (sailor men call camarinas firs), Poinciance Street, Hibiscus Street, and so on. From the pier I passed into an avenue, and after half a mile I struck a street which led right to a spacious compound, with red-roofed detached buildings—the Native Hospital. I struck the main building, met some Germans, asked for Herr Doktor, and was promptly introduced to Dr. Kersten, a big, genial, friendly German, with only a little English, but as I had a little German we fixed things up fairly. We were in a big cemented room, and on a table lay a Chinaman, who was having his bladder washed out. I looked at the Chow and he at me, and we smiled, because originally he had come under me for a sub-peritoneal rupture of his bladder, caused by falling on a hatch. I had transferred him to the hospital ship, who in turn, as they were going to sea, transferred him to the native hospital. I saw his bladder washed out, and then the doctor and I made the rounds of the hospital, accompanied by a German orderly, to whom we both appealed for English or German, as our need arose. He was a dead failure as an interpreter. There was a ward with some eight or more Japanese prostitutes in it. They were from a local "Yashiwarra"—gonorrhœa and syphilis of course. They looked clean and neat in their bright kimonos, and were quite cheerful, sitting on benches and doing their hair, and smiling at us in their bland Oriental manner. From there we went to a big ward; I counted 52 in it. They were of all kinds—phthisis, tropical ulcer (contracted from the ground by the squatting native when his external malleoli came into contact with the ground); they cut the ulcer right out, and let it heal by granulation. Cases of ophthalmia were here as well as accidents—a real jumble of cases. From here I went into a small ward, where a few dysenteric cases were being treated. The smell, the aspect of the shrivelled shrunken patients, with a kind of bed pan alongside them—one man was smoking—rather disgusted me. Everything was so dirty. Bacillary dysentery is common—fly infection the main cause. The native is unclean in most ways. Csator oil and mag. sulph. for these cases, and emetine for the amœbic ones, is the treatment. Then I saw a ward full of cases of varicella—not variola, said the doctor. Real lumps on their black skins. I noticed one young native with keloid developed in his vaccination scars.

Then came a ward full of ankylostonnasis cases; then cases of elephantiasis. I asked if he didn't link the elephantiasis to a culex and filariasis, but he didn't seem to think the three connected in any way. I only saw two cases of elephantiasis—both scrotal.

I asked about the anopheles and malaria. His reply was: "Kein Regen, kein Fieber; viel Regen, viel Fieber."

Well, we had been round, and I had seen most things, and was duly impressed. We got back to the main building, and talked a little, and he said to me: "You are going to look for the Scharnhorst?" I had to be diplomatic, and so I said: (?) "Ich bin ein Doktor," at which he laughed heartily, and said, "Ja, ich bin auch ein Doktor." He was a jolly chap, and I parted from him with regret. There are two German doctors here—one was under Ehrlich, and can speak English well, but I did not meet him.

My general impression of this native hospital is, I regret to say, bad. It was such a marked contrast to the splendid scientific administration of the gardens—dirt, dirt everywhere. When I saw the hospital it had 120 patients in it.

They run up to 400 and 500 in the wet season. Rabaul was dry as a bone during my three weeks there. The compound was large, but the buildings were sheds, not wards; big windowed, but no verandahs to speak of, and no French windows or doors opening out. They should have had open-air wards. The natives lay on benches, close packed along the walls, and on each bench was a strip of Indian matting. The walls were whitewashed, but dirty. The main building was unclean. The operating table and the whole surroundings not aseptic. I know nothing about the sanitary arrangements, nor the feeding. The German orderly had under him native boys. I saw no nurses, nor are there any. The only redeeming ward was the one the Japanese were in. Of course I don't know the conditions the German doctors work under, but I do know that the Rabaul native hospital needs drastic treatment from the point of view of asepsis and general cleanliness, and may I say it presents a very marked contrast of the wrong sort to the clean, well-kept native wards of the British Government Hospital in Suva.

In my limited experience of German administration I have been so accustomed to admire their thoroughness, their method and powers of organization, and their well-thought-out schemes, that the Rabaul Hospital casts a shadow unusually dark.—Viel Licht, viel Schatten.

Yours, etc.,

F. HAMILTON KENNY.

H.M.A.S., Upolu, Oct. 28, 1914.

## THE ENTERIC FEVER QUESTION.

Sir,—In a recent number of your journal I noticed a proposal to render our population immune to typhoid by vaccine.

Personally I cannot be accused of being opposed to the use of typhoid vaccine, as I believe my household was the first to use it in Australia. The old rule, "remove the cause," i.e., pollution of food, etc., with fœcal matter borne by contaminated flies, should first be followed, so as to protect the population from diseases—typhoid and the perhaps more fatal disease, gastro-enteritis—then vaccine may be used if necessary. Several years ago in a medical journal and otherwise I expressed a confident opinion that typhoid, which had become endemic in Wagga Wagga for years, was a fly-born epidemic, and that the measures taken by introduction of: (1) Flyproof pan retainers and use of sawdust; (2) Flyproof garbage tins; (3) Flyproof stable manure receptacles (and in some cases making dining-room and kitchen flyproof) would wipe the disease out.

I might remind you of the grounds I then gave for forming the opinion.

1. Inmates of houses protected from flies by flyproof wire doors and windows escaped.

2. That you could, by watching the habits of the flies, forecast the time of greatest number of cases, i.e., when flies get into a torpid state, remaining a long time on food, you could count with certainty on an increased number of cases.

3. Sharp, cold weather, which killed them, was invariably followed by disappearance of disease.

I pointed out that we were considered a fever-stricken town, and were shunned to the extent that people who could do so firmly declined to accept appointments which entailed residence in our town. The district hospital was so overcrowded with enteric as to be in our hot summer nights a veritable inferno; all other patients, whether medical or surgical cases, had to go elsewhere. The following is the number of cases reported as originating inside and outside the borough for three years before and three years after the foregoing steps were taken:—

| | In. | Out. |
|---|---|---|
| 1905 | 100 | 18 |
| 1906 | 71 | 12 |
| 1907 | 43 | 13 |
| 1908 | 69 | 23 |
| 1909 | 83 | 20 |
| 1910 | 20 | 21 |
| 1911 | 11 | 8 |
| 1912 | 5 | 7 |
| 1913 | 6 | 16 |

**Average Number of Cases.**

| | Within Borough. | Without Borough. |
|---|---|---|
| Before introduction of sanitary measures | 73 1-5 | 17 1-5 |
| After introduction | 10½ | 13 |

Cases outside borough may be looked on as contacts, as the Shires have not adopted reforms referred to.

Severe gastro-enteritis, with its heavy death-rate, is now practically unknown, cases now being few, mild and amenable to treatment, instead of being almost invariably fatal.

Some 25 years ago I learned that the method of sanitation then in existence was dignified with the name of the pan system, but I know of no sanitary authority justifying it being called a system.

Assumably, the intention was originally to instal the earth system; in fact, I have come across isolated instances of such being introduced. It is deplorable to find that, with the exception of a few cities and towns which have been sewered, matters are as bad as ever, and instead of removing the main cause of typhoid and gastro-enteritis, those places where flies can contaminate themselves by contact with human excreta by making such places flyproof, we now have a proposal to render our population immune to living in filthy surroundings as far as enteric is concerned (taking no steps to wipe out gastro-enteritis or the repulsive fact that fœcal contaminated flies are allowed to pollute our food).

The methods adopted in Wagga prevent flies polluting themselves with human excreta and tend to somewhat diminish their numbers.

This is a very important question, as it applies not only to this State, but to practically the Commonwealth.

As examples of the state of affairs, I take three typical instances that have come under my own notice in this State.

1. In a cathedral town, at the leading hotel a room was marked off as W.C. A non flyproof pan, no deodorant, no sawdust or dry earth. In the winter the hotel was pervaded with another odour than that of sanctity. What would it be like in summer?

2. The Government hospice at one of our most charming hill resorts I found to be spoiled by want of protection from flies.

3. You will find in country parts at hotels and farms alike a leaky kerosene tin, surrounded by a shelter of bagging, representing our enlightened condition in this the twentieth century.

Surely it is not to our credit we should hear more from scientists and stockowners re steps to prevent losses among stock than from those bodies who are responsible for the carrying out of health regulations.

Is it not time that country towns which have a night-soil service should adopt a uniform system such as in Wagga, which has been found so reliable; and that isolated residences and places which cannot afford a night-soil service be made to adopt light-proof and therefore flyproof closets, with covered garbage pits.

Is it not a matter for reproach that a people who are the most progressive and cleanliest should have so long tolerated such a cause of suffering and death to continue so long, and now to be asked to avail themselves of anti-typhoid vaccine to render themselves immune to such surroundings does not redound to our credit.

HENRY STOKER, F.R.C.S.I., D.P.H.

Wagga Wagga, October 24, 1914.

# Medical Appointments.

Dr. Backhouse has been appointed Medical Officer of Health for the southern portion of the Colac Shire, Victoria.

Dr. Morris Jacobs has been appointed Medical Officer of Health for that portion of the Gordon Shire which lies east of the Loddon River, Victoria, in place of Dr. C. R. Merrellees.

Dr. W. Heitland Godby has been appointed Resident Medical Officer at the Adelaide Hospital, South Australia.

Dr. W. J. McCristal has been appointed Resident Medical Officer at the Adelaide Hospital, South Australia.

Dr. G. J. Campbell has been appointed Acting District Medical Officer and Public Vaccinator, Donnybrook, Western Australia, during the absence of Dr. F. J. Elliot.

Dr. A. R. Adams has been appointed Medical Officer of Health at Esperance, Western Australia, in place of Dr. J. Innes Stephens (resigned).

Dr. L. T. Baker has been appointed Medical Officer of Health at Guilford, Western Australia, in place of Dr. Fergusson Stewart (on leave).

Dr. W. F. Orr has been appointed temporarily to the post of Oculist to the Marine Board of Victoria, in the place of Dr. J. W. Barrett.

Dr. M. B. O'Sullivan has been appointed Resident Infirmary Surgeon at the Women's Hospital, Melbourne.

## Medical Appointments Vacant

QUEEN VICTORIA SANATORIUM,
WENTWORTH FALLS.

RESIDENT MEDICAL OFFICER required for above Sanatorium. For terms and conditions of appointment apply to The Secretary,
Queen Victoria Homes Office,
7 Bligh Street, Sydney.

ROYAL ALEXANDRA HOSPITAL FOR CHILDREN,
Camperdown, Sydney, N.S.W.

CHIEF RESIDENT MEDICAL OFFICER REQUIRED.

APPLICATIONS are invited for the position of CHIEF RESIDENT MEDICAL OFFICER at the above Institution. Applicants must have graduated at least two years. Duties to commence on the 1st January, 1915. Salary, first year £200 per annum, increasing by £50 each year to £300. Applications, with testimonials, to be forwarded to the undersigned not later than the 4th December.

CLARENCE R. MOSS,
Secretary Royal Alexandra Hospital for Children,
Camperdown, Sydney.

WANTED TO PURCHASE, a Medical Practice. Cash; take £1000 to £1500 a year.
Apply, MEDICO, G.P.O., Adelaide.

## Births, Marriages, and Deaths.

**The charge for inserting announcements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps, with the notice, not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.**

### Birth.

WEIHEN.—On October 26, 1914, at "Bryntysilis," Greenoaks Avenue, Darling Point, the wife of A. Wallace Weihen, M.A., M.D.—a son.

## Diary for the Month.

Nov. 17.—New South Wales Branch B.M.A., Council Meeting.
Nov. 18.—Western Australian Branch B.M.A., Branch Meeting.
Nov. 18.—Victorian Branch, B.M.A., Clinical Meeting.
Nov. 24.—Victorian Branch B.M.A., Eye and Ear Section.
Nov. 24.—New South Wales Branch B.M.A., Committee Meeting.
Nov. 25.—Victorian Branch, B.M.A., Council Meeting.
Nov. 26.—South Australian Branch, B.M.A., General Meeting.
Nov. 27.—Melbourne Hospital Clinical Meeting.
Nov. 27.—New South Wales Branch B.M.A., Ordinary Meeting.
Dec. 1.—New South Wales Branch B.M.A., Council Meeting.
Dec. 2.—Victorian Branch B.M.A., Annual General Meeting.
Dec. 11.—New South Wales Branch B.M.A., Ordinary Meeting.
Dec. 15.—New South Wales Branch B.M.A., Council Meeting.
Dec. 16.—Western Australian Branch B.M.A., Branch Meeting.
Dec. 22.—New South Wales Branch B.M.A., Committee Meeting.

## Books Received.

SYPHILOLOGY AND VENEREAL DISEASE, by C. F. Marshall, M.D., M.Sc., F.R.C.S., Third Edition, 1914. London: Bailliere, Tindall & Cox, Demy 8vo., pp. 465. Price 10/6.

PHYSIOLOGICAL PRINCIPLES IN TREATMENT, by W. Langdon Brown, M.A., M.D. (Cantab.), F.R.C.P., Third Edition, 1914. London: Bailliere, Tindall & Cox, Crown 8vo., pp. 408. Price 5/-.

CANE SUGAR AND HEART DISEASE, by Arthur Goulston, M.A., M.D. (Cantab.), 1914. London: Bailliere, Tindall & Cox, Demy 8vo., pp. 107. Price 5/-.

THE INTENSIVE TREATMENT OF SYPHILIS AND LOCOMOTOR ATAXIA BY AACHEN METHODS, by Reginald Hayes, M.R.C.S., etc., 1914. London: Bailliere, Tindall & Cox, Crown 8vo., pp. 64. Price 3/6 net.

CATECHISM SERIES, Part I., Botany, Second Edition, revised and enlarged, 1914. Edinburgh: E. & S. Livingstone, pp. 80. Price 1/- net.

CATECHISM SERIES, Part II., Medicine, Second Edition, revised and enlarged, 1914. Edinburgh: E. & S. Livingstone, pp. 180. Price 1/- net.

## Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

| Branch. | APPOINTMENTS. |
|---|---|
| QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane). | Brisbane United F.S. Institute.<br>F.S. Lodges at Longreach.<br>F.S. Lodges at Warwick. |
| WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth). | Swan District Medical Officer.<br>All Contract Practice Appointments in W.A. |
| NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney). | Australian Natives Association.<br>Balmain United F.S. Dispensary.<br>Burwood District F.S. Institute.<br>Goulburn F.S. Association.<br>Leichhardt and Petersham Dispensary.<br>M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney.<br>N.S.W. Ambulance Association and Transport Brigade.<br>N. Sydney United F.S.<br>People's Prudential Benefit Society.<br>Phoenix Mutual Provident Society.<br>F.S. Lodges at Braidwood.<br>F.S. Lodges at Casino.<br>F.S. Lodges at Lithgow.<br>F.S. Lodges at Mudgee.<br>F.S. Lodges at Orange.<br>F.S. Lodges at Parramatta, Granville, Penrith and Auburn.<br>Killingworth Colliery, Newcastle.<br>Seaham Colliery No. 1, Newcastle.<br>Seaham Colliery No. 2, Newcastle.<br>West Wallsend Colliery, Wallsend. |
| SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide). | The F.S. Medical Assoc. Incorp., Adelaide. |

### EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.